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WELSH COMMONS

San Francisco, CA

Draft
Environmental Impact Report

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ENVIRONMENTAL IMPACT REPORT

WELSH COMMONS

81.59E

7 MAY, 1982

WRITTEN COMMENTS SHOULD BE SENT TO THE ENVIRONMENTAL REVIEW OFFICER, 45 HYDE STREET, SAN FRANCISCO, CA 94102

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I. SUMMARY

A. PROJECT DESCRIPTION

The proposed Welsh Commons would be located in the South of Market area of San Francisco on 4th Street in the block bounded by Zoe, Freelon and Welsh Streets. The entire project site is lot 119 in Assessor's Block 3776, and is about 64,600 square feet in area.

The project sponsor wishes to provide a mixed-use development of residential, retail and service/wholesale/light industrial space in an area of the city that is experiencing new development.

The project would contain 408,000 square feet of gross floor area. Approximately 148,000 square feet would be devoted to 160 condominium units: 19 studios, 104 one-bedroom, 37 two-bedroom units. Sixteen units would be available for low-income housing. Approximately 55,600 square feet are planned for service/wholesale space. At ground level 12,000 square feet of retail space and 19,000 square feet of light industrial space are planned. There would be 265 parking spaces at 2 underground levels.

The office support space would be located on the ground, second and third floors in mid-block. The condominium units would be located around a central second and third floor court with 3 stepped towers to the north and east. The condominium structures would be 11 stories including the 2 underground parking levels.

Certain building components would be oriented on a north-south axis to maximize solar energy potential. Solar collectors would be built into the structures to provide hot water for all residential units.

B. IMPACTS

An Initial Study was prepared for the Welsh Commons project to identify potential environmental issues resulting from the proposed project. These issues are covered in this EIR. Certain potential environmental issues of the proposed project were determined to be insignificant, and therefore are not addressed in this EIR, (page 46). A copy of the Final Initial Study is attached to this report as Appendix A, page A-1.

1. Land Use

A mixed-use project of condominiums, wholesaling, parking and industrial and commercial uses would replace the existing uses on the site: 4 light industrial structures (3 of which are not in use) and a vacant lot. The project would introduce residential units into a predominantly light-industrial area, while the provision of additional industrial, commercial and wholesaling space uses would continue the existing pattern of land use (page 47).

2. Visual Quality and Urban Design

The project would introduce a new 10-story element into the low-rise and vacant lot landscape of the area. The size, shape and bulk of the proposed structure would contrast with existing older structures adjacent to the site, which are characteristically square or rectangular in shape. The 105-foot condominium towers would be the first structures to be built above 65 feet in the adjacent area and thus would establish a precedent that could have extensive long-term effects on a large area if other land owners asked for similar variances to the existing height limit.

The visual transitions between the existing structures and the proposed project would be accomplished by the rectilinear forms of the structures, the stepping of levels and terraces, and by the use of compatible building materials at the lower levels. However, the large expanses of glass at the street level would contrast with the windowless walls and window placement of the neighboring buildings.

The pedestrian arcades, storefront windows and proposed street trees would provide human scale and pedestrian interest to the area. Open space would be provided by a central roof garden and the pedestrian arcades along 4th and Freelon Streets (page 48).

3. Transportation, Circulation and Parking

The proposed project would generate about 2,800 daily person trips, excluding those trips to and from the retail/service development which would be internal to the project. Approximately 360 of these trips would occur during the evening peak hour, and 210 would occur during the morning peak hour. This would represent about 0.6% of the cumulative peak hour generation of other San Francisco projects under construction approved, or under formal review (page 61).

The increased traffic generated by the proposed project would not degrade the expected peak hour service levels of nearby intersections (page 67).

The proposed project would increase MUNI's 1983 load factors by a maximum of 2% However, 7 of the 11 MUNI lines passing within 2,000 feet of the proposed project are expected to experience crowding by 1983 due to the cumulative impact of this and other downtown projects (Table 11, page 72).

The proposed project would eliminate 9 existing parking spaces and provide 265 new parking spaces (page 75).

4. Noise

If typical construction equipment and techniques are used, the highest noise levels would be expected to be produced by pile drivers, which could produce noise levels from 86 to 100 dBA on the site and from 66 to 80 dBA inside the nearest neighboring buildings. Other equipment such as impact wrenches, excavation vehicles, air compressors and generators could raise sound levels inside adjacent buildings from 56 to 70 dBA (page 80).

5. Air Quality & Climate

Demolition, earthmoving and construction activities are likely to increase particulate concentrations in adjacent areas during the construction phase. The project would act as an indirect source of automobile emissions through the generation of automobile traffic (page 81).

6. Energy

Assuming a building lifetime of 50 years and excluding transportation-related energy use, the project's lifetime energy cost would be 1.9 trillion BTU, or the equivalent of 350,000

barrels of crude oil. The project would conform to energy conservation standards for new buildings set by Title 24 of the California Administrative Code (page 92).

7. Employment, Fiscal Factors, Population and Housing

The project is expected to generate approximately 200 permanent jobs on-site, while eliminating 3 jobs currently located on the site. An additional 235 jobs are expected to be indirectly created by the project as secondary employment in the Bay Area (page 93).

The project would be expected to create a housing demand for an additional 114 workers who might want to move into the City. The project would add 160 units to the housing stock of the City (page 94).

At full occupancy the project could be expected to raise City revenues derived from the site from the current $16,000 per year to between $502,000 and $664,000 per year (page 96).

8. Cumulative Public Services

Increased construction in the downtown area could result in an increase in crime due to the resulting increase in population and property value. Cumulative development would eventually increase the demand for police services because of the resulting additional population, property and traffic.

It can also be anticipated that the number of fire department calls for service would increase with the additional people occupying the area.

9. Growth Inducement

The proposed project would be part of approximately 9 million square feet of the approved or proposed office projects in the South of Market area. Cumulative development is expected to increase the demand for housing, parking facilities, public transit services and public services and utilities.

The chief growth-inducement effects of the project would be locational. Residential units would be introduced into a primarily light-industrial area with a mix of light-industrial, retail and wholesale uses. In this sense the project could encourage the development of other mixed uses in the area (page 98).

C. MAJOR MITIGATION MEASURES

1. Visual

Trees and shrubs would be provided on streets and open air terraces to provide a pedestrian scale and visual interest. Windows would be provided at ground level allowing pedestrian views of internal retail and wholesaling building space (page 99).

Setbacks at upper levels would reduce the perceived bulk and mass of the structure. Brick would be used on exterior brick surfaces to complement the adjacent brick structures (page 99).

2. Transportation

The project sponsor would encourage transit use by employees of the proposed building by means including the sale on-site of BART and MUNI passes, and providing for an employee carpool/vanpool system in cooperation with RIDES for Bay Area Commuters, or other such enterprises (page 100). These services would also be made available to residents of the project's housing units.

The project sponsor would, in consultation with the Department of City Planning, encourage the implementation of a flexible time system for employee work hours and a preferential parking program for car and van pools, in order to reduce peaks of congestion in the transportation system. Subsequent to approval of the project, the sponsor would consider conducting a transportation survey in accordance with the methodology of the Department of City Planning, or alternatively provide an in-lieu contribution for an overall survey of the downtown area to be conducted by the City. Secure bicycle parking would be provided relative to the demand generated by project occupants (page 100). (The minimum number of bicycle spaces as specified in the City Planning Code Article 1.5 would be 13).

Upon occupancy of the project the project sponsor would consider conducting a parking needs survey and development of a parking management program for occupants of the building (page 100).

Subject to approval by City Department of Public Works (and other concerned City departments), on-street parking would be prohibited on Freelon Street between 4th Street and the project driveway (page 100).

3. Noise

During construction impact tools and equipment would be muffled to the satisfaction of the Department of Public Works. In order to reduce the noise impacts of pile drivers, holes for the piles can be pre-drilled and night pile-driving precluded because of the potential for sleep disturbance of nearby residences (page 101).

4. Air Quality and Climate

To reduce the impact of dust generation during earthmoving, demolition and construction, exposed earth surfaces would be wetted during these processes (page 101).

The mitigation measures for the air quality impacts of traffic generated by the project are those discussed previously to reduce traffic volumes and congestion.

5. Energy

Portions of the project would be oriented south to maximize receipt of solar energy, and one-third of the water heating budget for the project would be provided through solar water heaters. A qualified solar architect would be consulted during the design process to recommend specific design strategies (page 102).

6. Housing

The demand for housing generated by the office and industrial/commercial/retail space of the project would be met by the proposed 160 residential units as part of the project (page 103).

D. ALTERNATIVES

1. No Project

The project site would remain as it is with the 4 structures (partially not in use and in need of structural repair) and vacant lot. Site conditions are described in the Environmental Setting (Chapter III of this report). The project sponsor has rejected this alternative as inefficient and uneconomical (page 108).

2. Project Site As Industrial Use with 50-foot Height Limit

The project under this alternative would contain only industrial use under the existing zoning. Two analyses for this alternative were prepared the: first considered the construction of a single story industrial building; the second examined a proposed mixed

use development with the assumption that industrial space would be included in the lower floor. Environmental impacts associated with this alternative would be less than the proposed project. This alternative was rejected by the project sponsor as it would not be financially feasible to recover the cost of investment if the site were only used for industrial purposes (page 108) and because it does not meet the objectives of the project.

3. Guiding Downtown Development: Parking Facility

This alternative would entail the construction of a 5-floor parking garage with approximately 1,200 spaces being accommodated in the structure. The environmental impacts related to transportation circulation and associated noise and air quality impacts would be greater than the proposed project. Parking tax revenue to the City would contribute to a positive cost revenue ratio. The project sponsor rejected this alternative because it would not meet the objectives of the proposed project (page 111).

4. Project with an 80-Foot Height Limit

This alternative is similar to the proposed project except the building would be 25 feet lower and contain 4,500 square feet less public open space and 9 fewer parking spaces and 3,200 square feet less wholesaling space. The visual impacts related to the height contrast with adjacent buildings would be less than the proposed project. Other environmental impacts would be similar to the proposed project. The project sponsors rejected this alternative because they felt the 80-foot limit would restrict the project design (page 112).

5. Project with a 50-Foot Height Limit (Correct Zoning Limit)

This alternative includes 146 housing units in a 5-story building. Approximately 57,000 square feet would be available for commercial office space and about 18,000 square feet for retail uses. A parking garage could accommodate 298 parking spaces. The building would conform to height and bulk limits and would include three courtyards each on a different level. Terrances, open courts, plaza, a meeting room, an exercise room and a tennis court would be available. The traffic peak hour trip genertion would be 35% more than the proposed project. About 100 employment opportunities more than the proposed project would be created by this alternative. The project sponsor rejected this alternative due to the limitations imposed by the 50-foot height limit (page 127).

II. PROJECT DESCRIPTION

A. LOCATION

The proposed Welsh Commons would be located in the South of Market area of San Francisco on 4th Street in the block bounded by Zoe, Freelon and Welsh Streets in a M-2 (Heavy Industrial) district. The entire project site is lot 119 in Assessor's Block 3776, which is about 64,400 square feet. The general location of the project site is shown in Figure 1, page 9; the precise location is shown in Figure 2, page 10.

B. OBJECTIVE OF SPONSOR

The project sponsor, Jon Corporation N.V.,[1] wishes to provide a mixed-use development of residential, light industrial, commercial and office space in an area of San Francisco that is experiencing new development. The project sponsor hopes to achieve a reasonable return on his investment.

C. PROJECT CHARACTERISTICS AND SCHEDULING

The proposed project would contain 408,000 gross square feet. A rendering of the project is shown in Figure 3, page 11. The floor plans are shown in Figures 4, 5, and 6, pages 12, 13, and 14. Elevations of the proposed project can be found in Figures 7, 8, 9, and 10, pages 15-18. Figure 11 (page 19) is a section of the project. Approximately 148,000 square feet would contain 160 condominium units (19 studios, 104 one-bedroom and 37 two-bedroom units). The units would be designed to sell in the range of $90,000 to $180,000 (1981 dollars). Sixteen units would be available for low and moderate income housing.

---

[1] Dutch naamloze vennootschap, "Incorporated"; this is the name under which the Corporation is registered in the United States.

Regional Location Map

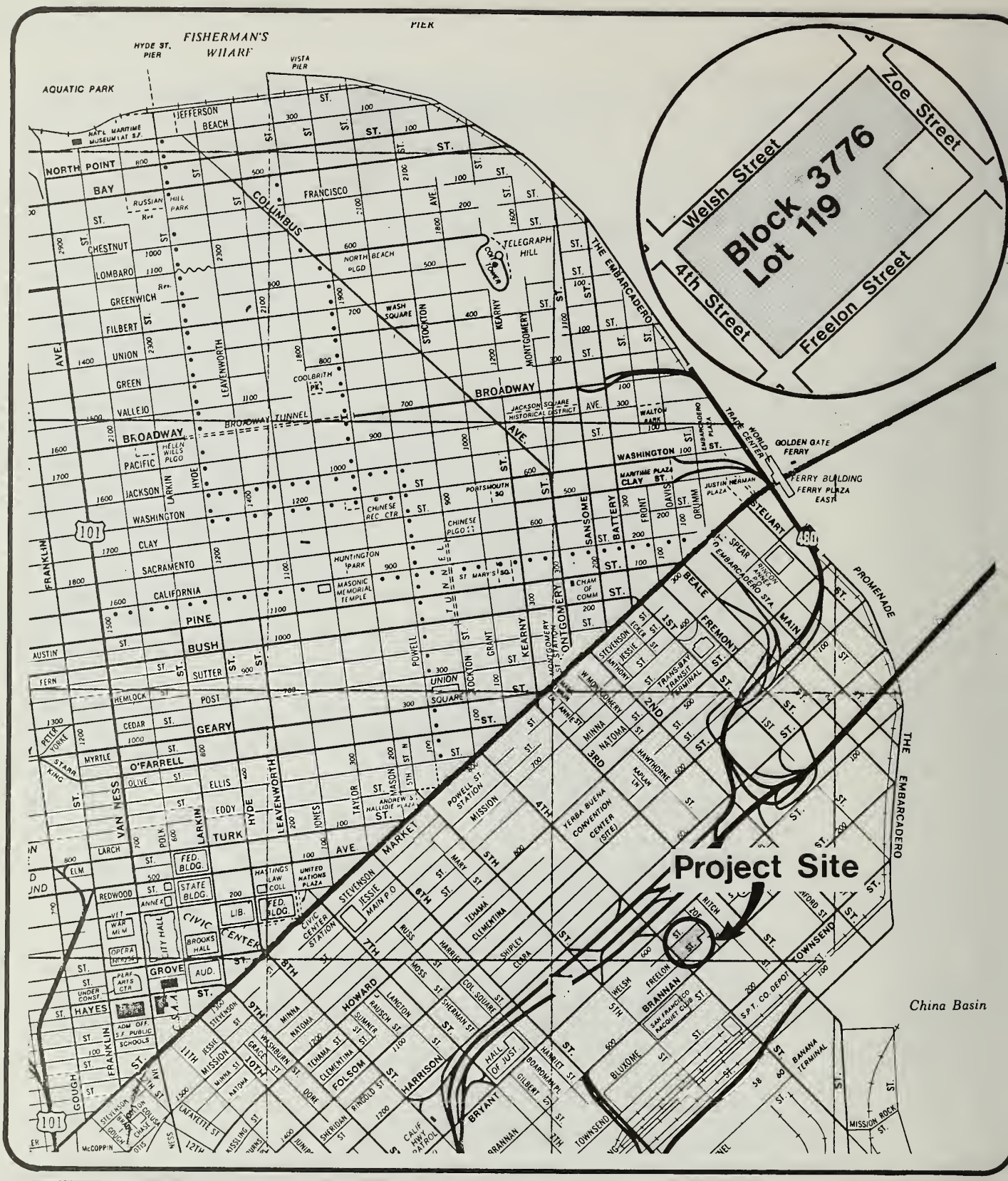
North

0 1 2 4

Scale Miles

Source: USGS Topographic Sheet

Figure No.1



Site Location Map

Basic map reproduced by permission of the California State Automobile Association, copyright owner.

North

0 500 1000 2000

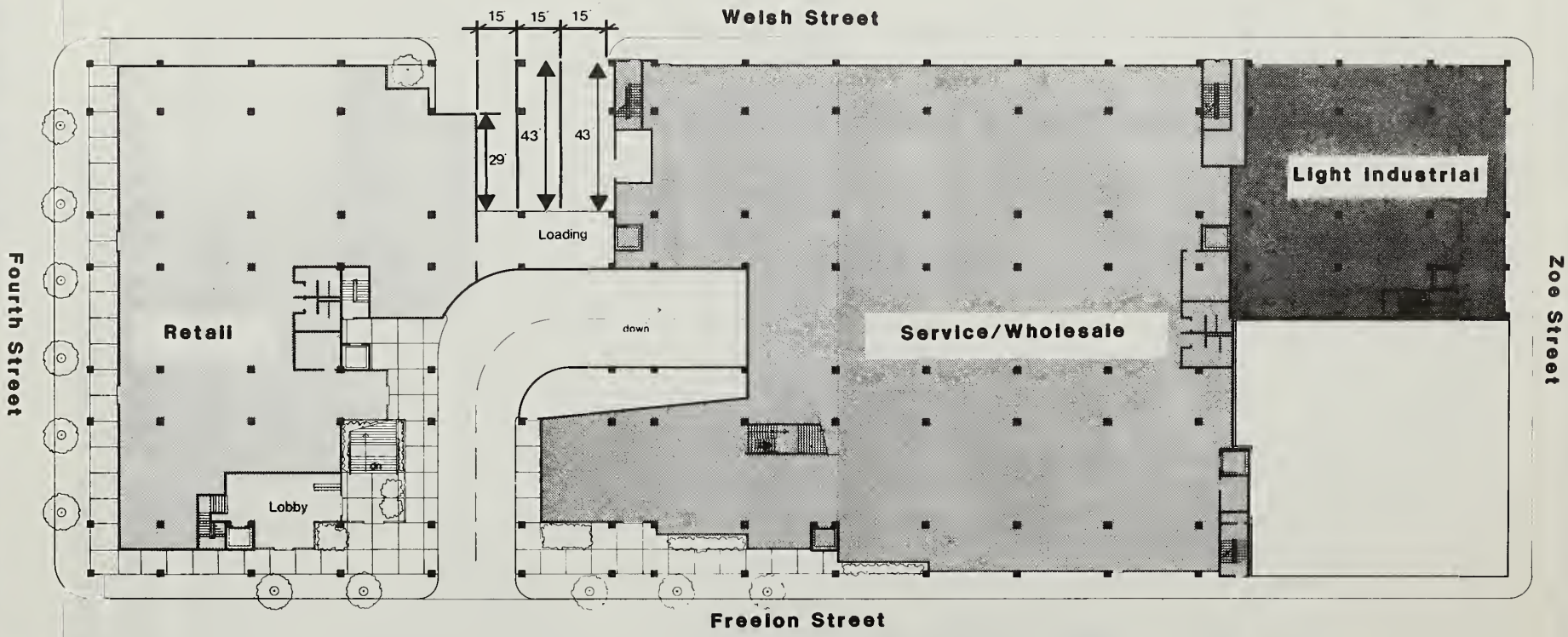
Scale Feet

Figure No. 2

Rendering of Project: looking east, corner of Freelon and Fourth Streets

Source: Tai Associates Architects

Figure No. 3



North

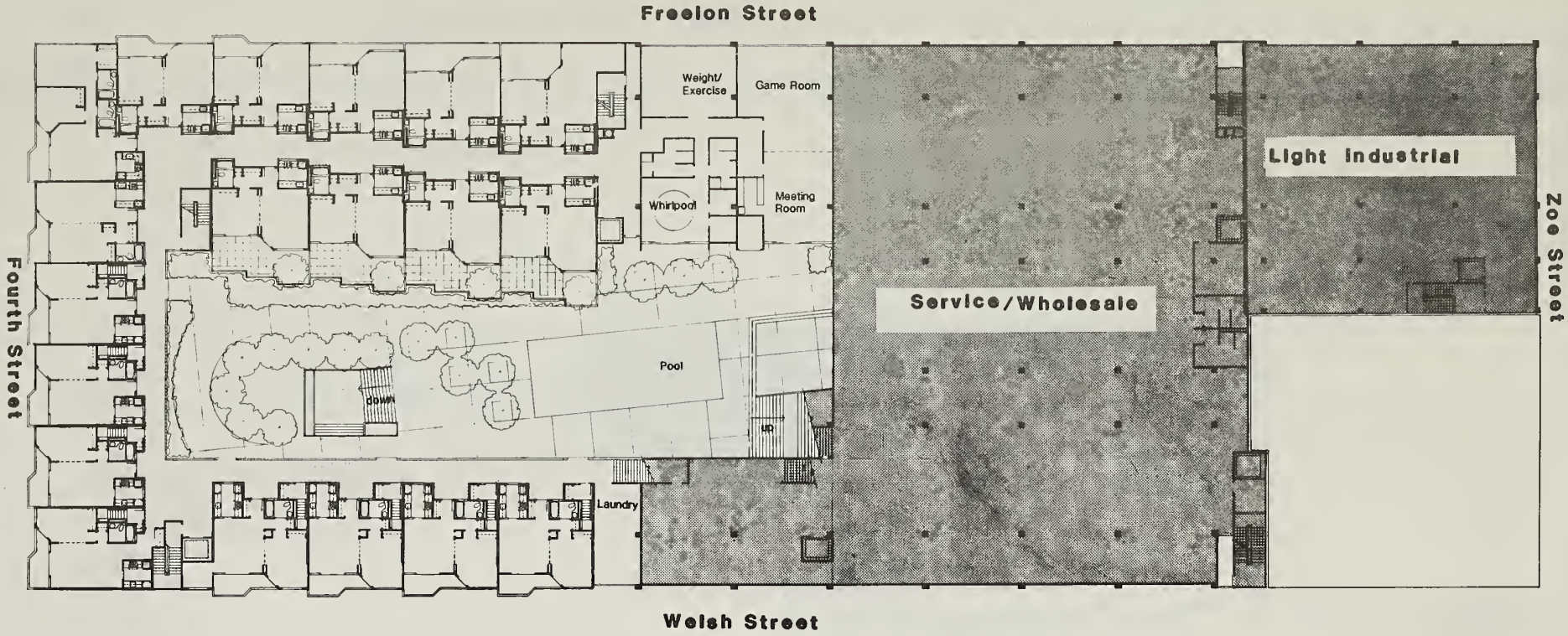
0 20 40 80

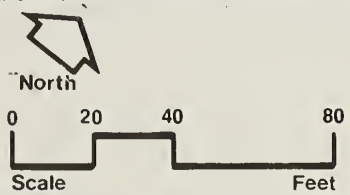
Scale Feet

First Floor Plan

Figure No. 4

Source: Tai Associates Architects

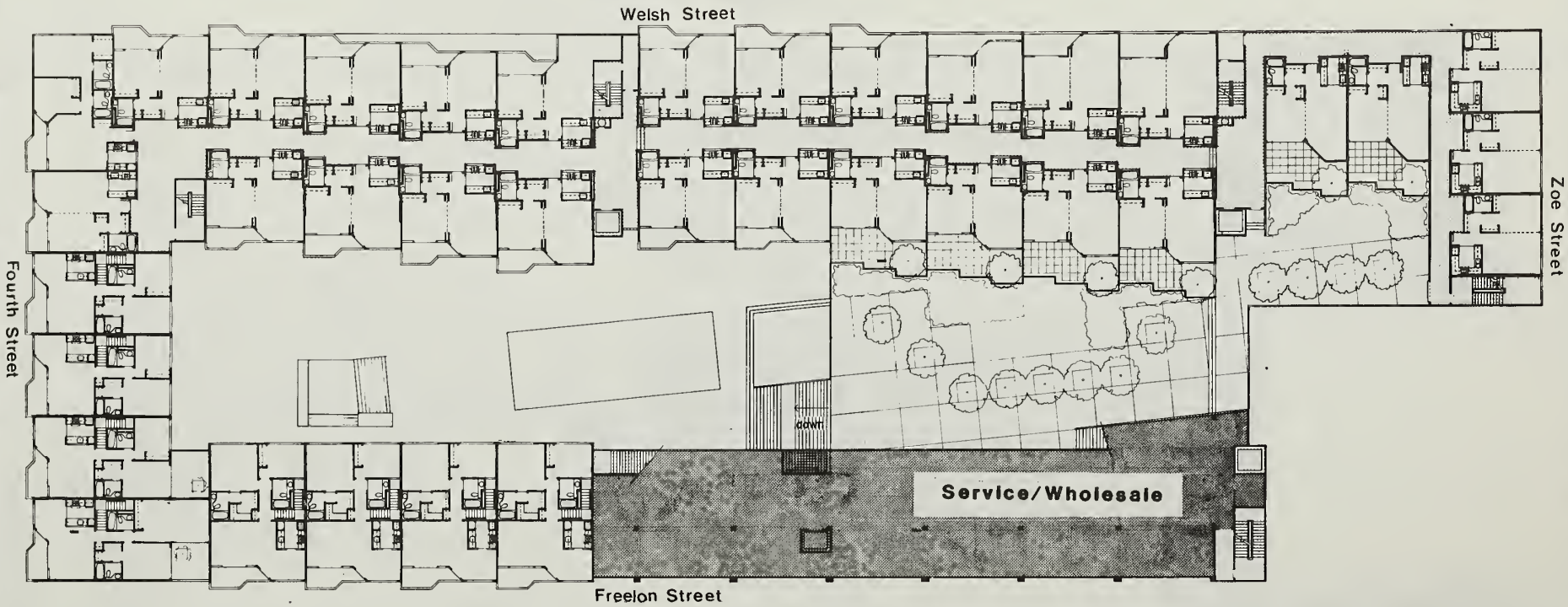


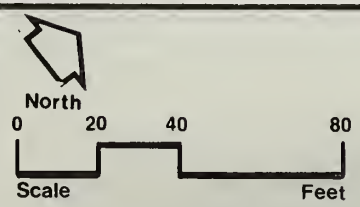


Second Floor Plan

Figure No. 5

Source: Tai Associates Architects

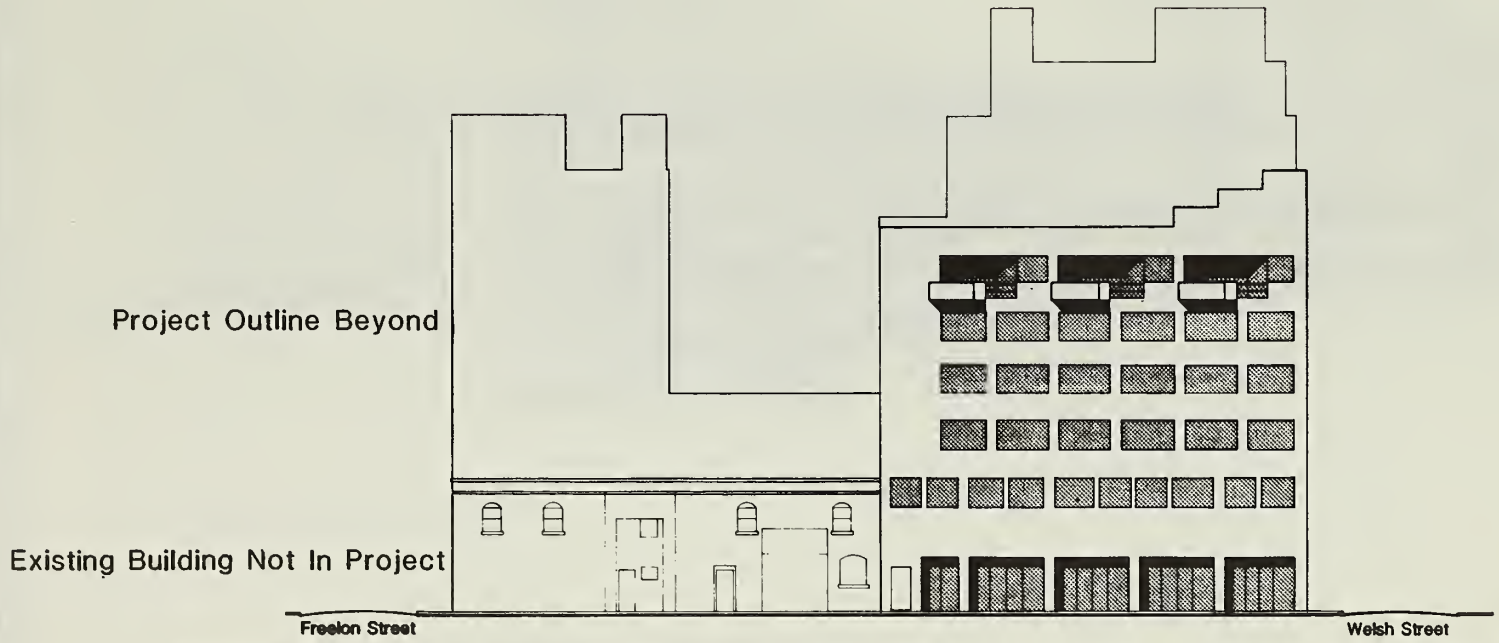




Third Floor Plan

Figure No. 6

Source: Tai Associates Architects



Zoe Street Elevation (facing west)

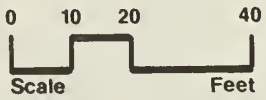
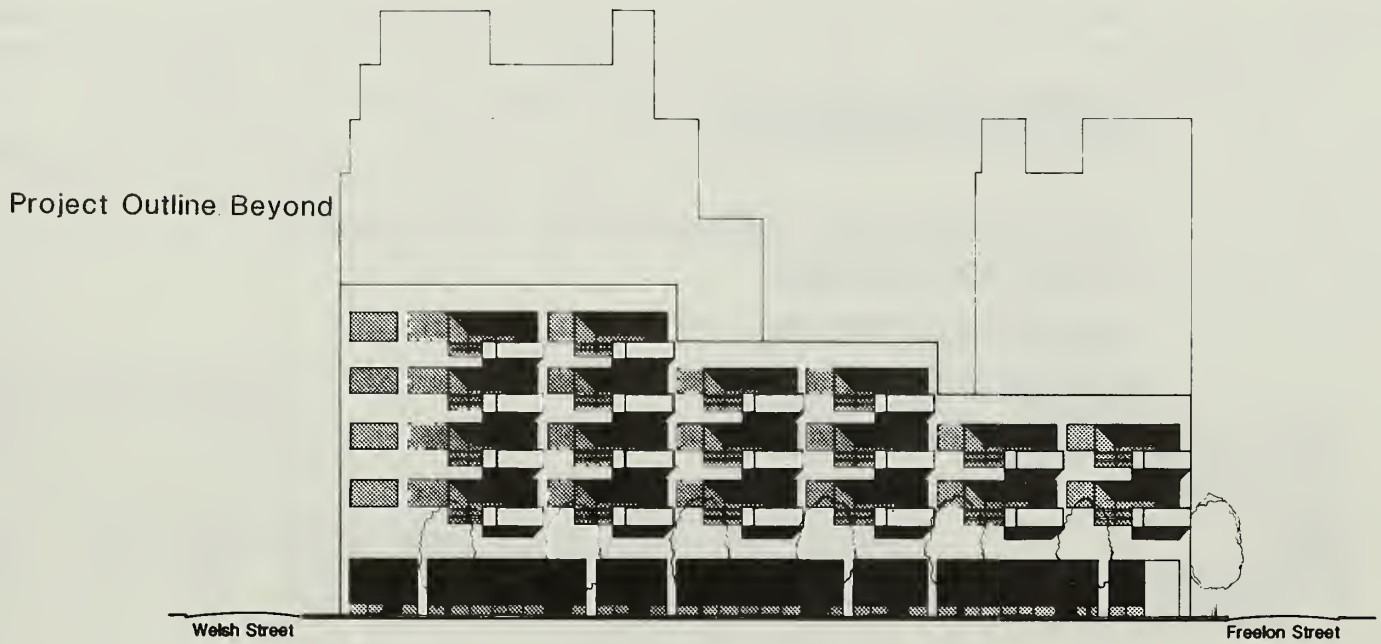


Figure No. 7

Source: Tai Associates Architects

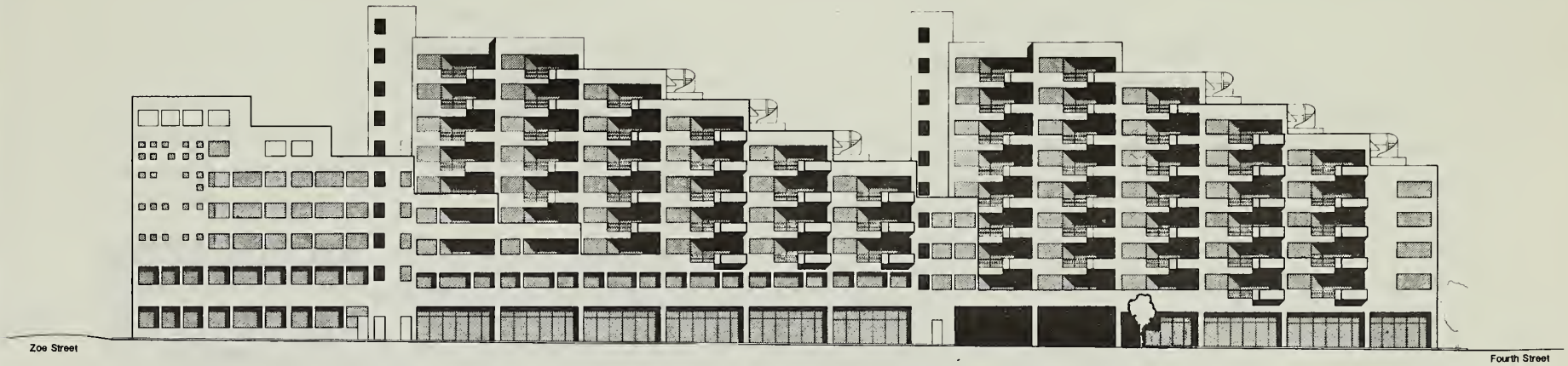


Fourth Street Elevation (facing east)

0 10 20 40
Scale Feet

Figure No. 8

Source: Tai Associates Architects



Welsh Street Elevation (facing south)

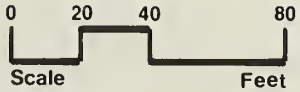
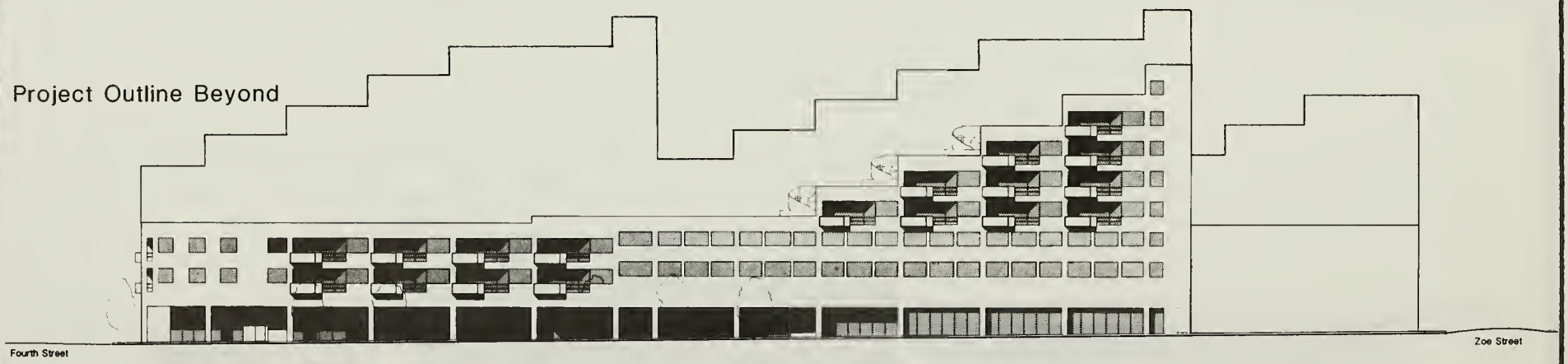
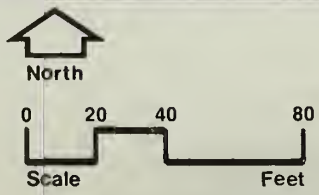


Figure No. 9

Source: Tai Associates Architects

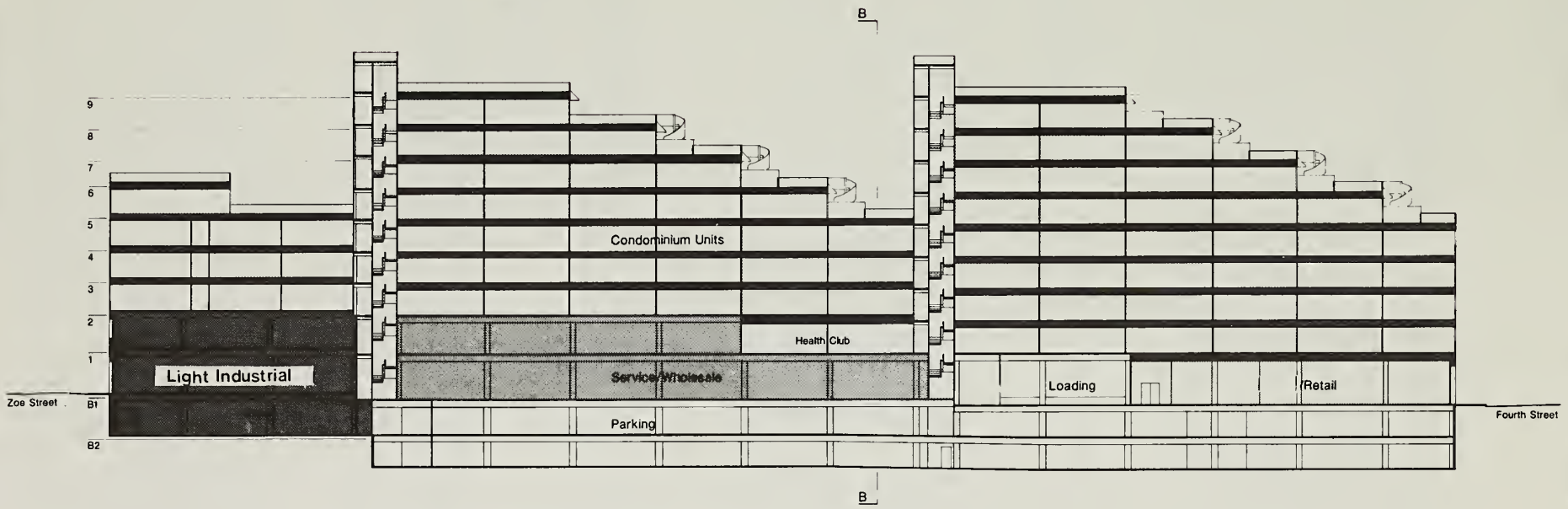




Freelon Street Elevation (facing north)

Figure No. 10

Source: Tai Associates Architects



Section of Project (facing south)

0 20 40 80
Scale Feet

Figure No. 11

Source: Tai Associates Architects

The specific non-residential uses of the site have not been fully determined and tenants are not identified. Space has been allocated for service/wholesaling, retail and light industry. Approximately 55,600 gross square feet are planned for service/wholesaling space (e.g. various services related to the downtown office area). About 12,000 square feet of retail space accessible directly on 4th Street, and 19,000 square feet of light industrial space (manufacturing, printing, contracting, etc.) are planned on the ground, first basement and second floors. The service/wholesaling space would be located on the ground and second floors in mid-block. The condominium units would be located around a central second and third floor court with 3 stepped towers to the north and east. The condominium structures would be 11 stories including 2 levels of parking below ground. One parking space per dwelling unit, one parking space per 1,000 square feet of wholesale/service space, 1 parking space per 1,500 square feet of light industrial space plus 2 spaces per 1,000 square feet of retail space would be required on site for a total of 253 parking spaces. There would be 265 spaces available for parking in the project occupying about 120,000 square feet. The project is designed to provide approximately 54,000 square feet of terraces and open spaces, of which about 19,000 square feet would be private use and about 35,000 square feet for public use. Amenities would include a game room, swimming pool, weight/exercise room, meeting room and a sauna/steam/whirl pool facility.

Certain building components would be oriented on a north-south axis to maximize solar energy potential. Solar collectors would be built into the structures to provide hot water for all residential units.

The commercial/retail space would be designed to accommodate neighborhood-oriented services with 3 shared loading docks on the ground level on Welsh Street.

D. REQUIRED APPROVALS

1. Planning Code

Because the proposed project would exceed the height limit in the area by 55 feet, the project sponsor has applied for a zoning reclassification to 105-F Height and Bulk District on March 31, 1981, which would limit building heights to 105 feet. Above a height of 80 feet in this district, the maximum length of a structure would be 110 feet and the maximum diagonal dimension allowed would be 140 feet. (Bulk limit "F" as established by the City Planning Code.)

The application for zoning reclassification would be the subject of a public hearing before the City Planning Commission, after certification of the Final EIR. The Board of Supervisors has the final authority to amend the Zoning Map and would take action either following approval by the City Planning Commission, or following appeal of disapproval by the Commission. As stated in City Planning Code, Section 302(a), the Board of Supervisors may amend the Code, including the Zoning Map "whenever the public necessity, convenience and general welfare require."

On March 31, 1981 Jon Corporation filed Conditional Use Application CU 81.24 with the Department of City Planning to develop the site as a Planned Unit Development (PUD).

Pursuant to sections 303 and 304 of the San Francisco Planning Code, a development must meet certain criteria before a Conditional Use permit may be granted. These criteria include requirements that the development be compatible with the neighborhood and not detrimental to the health, safety and welfare of people living or working in the area or injurious to property in the vicinity. Specific criteria for Planned Unit Developments require that:

- the parcel include an area of at least one-half acre;
- the property be either under common ownership or the subject of a single application by all owners;
- the project affirmatively promotes objectives and policies of the City's Comprehensive Plan;
- the project provide adequate off-street parking and open space usable by project occupants and, where appropriate, by the public;
- the density allowed not be equivalent to a zoning reclassification; that only neighborhood-oriented commercial uses be allowed in residentially zoned districts;
- no exemptions from height limits be authorized other than those allowed in the Planning Code.

The proposed Welsh Commons project would comply with major provisions of the San Francisco City and County Comprehensive Plan. It would provide needed housing space as well as meet the demand for increased office space. Several of the objectives and policies from the Residence, Commerce/Industry and Community Safety Elements applicable to this mixed-use project are discussed in Section IIIA., Land Use, page 23.

As part of the PUD, the project would seek authorization for exception to rear-yard requirements for residential use.

The Conditional Use Application would be the subject of a public hearing before the City Planning Commission after certification of the Final EIR. If appealed, the Conditional Use Application would be heard by the Board of Supervisors, also at a public hearing.

2. Subdivision Approval

Prior to sale of the condominium units, the project sponsor would need to obtain approval of an application to subdivide the property pursuant to Section 1303(c) of the Subdivision Code, Chapter XIII of Part 2 of the San Francisco Municipal Code. Such an application must be filed with the Department of Public Works, which refers it to the Department of City Planning, Bureau of Engineering, Bureau of Building Inspection, and Human Rights Commission. In the case of the City Planning Commission, a public hearing to consider consistency with the Master Plan is necessary (Section 1332 of the Subdivision Code). This application would be considered at the same time as the Conditional Use Application. Subdivisions of 50 units or more require provision of a minimum of 10% low and moderate-income housing, provided that the City Planning Commission finds that public subsidies are available (Section 1341 of San Francisco Subdivision Code). The project would provide the required 16 units designated for this category.

III. ENVIRONMENTAL SETTING

A. ZONING AND LAND USE

1. Zoning

The project is within an M-2 (Heavy Industrial) District (Figure 12, page 24). As described in the City Planning Code:

> "These districts are the least restricted as to use and are located at the eastern edge of the City, separated from residential and commercial areas. The heavier industries are permitted, with fewer requirements as to screening and enclosure than in M-1 districts, but many of these are permitted only as conditional uses or at a considerable distance from Residential districts."[1]

Principal permitted uses in the M-2 District are heavy industry and food processing; housing is a conditional use. The service/wholesaling, retail and light industrial space proposed for the development at the site are permitted uses within an M-2 District. The floor area ratio (FAR) for an M-2 District is 5 to 1. The nearest R (residential district) to the proposed project is RC-2 to the east (Figure 12, page 24) which allows a density ratio not exceeding one dwelling unit for each 600 square feet of lot area.

The project site is located within the 50-X Height and Bulk District (Figure 12, page 24) which limits building heights to 50 feet; bulk requirements do not pertain to structures in this district.

2. Land Use

The proposed site is located in the South of Market district, an area undergoing change in land use. Industrial activity in San Francisco has historically focused in the South of Market area. This area around the proposed project was rebuilt following the 1906 earthquake and fire with generally high density industrial structures which accommodated a variety of warehousing and light manufacturing activities. In recent years, changes in

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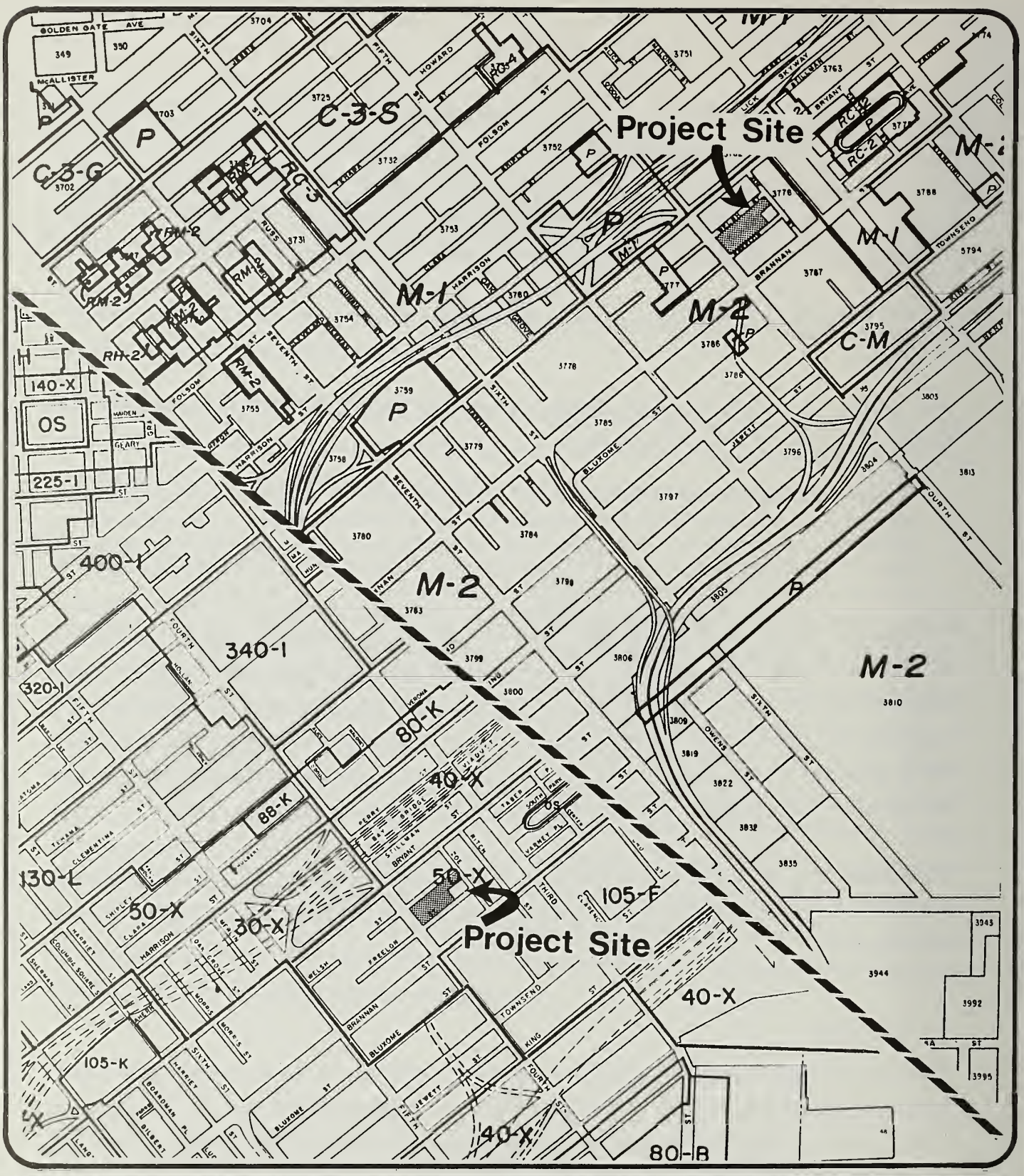
[1] San Francisco Department of City Planning, Planning Code, Section 210.6, 1979 Edition.



Existing Zoning/Height and Bulk Districts

North

0 400 800 1600

Scale Feet

Source: City Planning Code; Zoning Map of the City & County of San Francisco

Figure No. 12

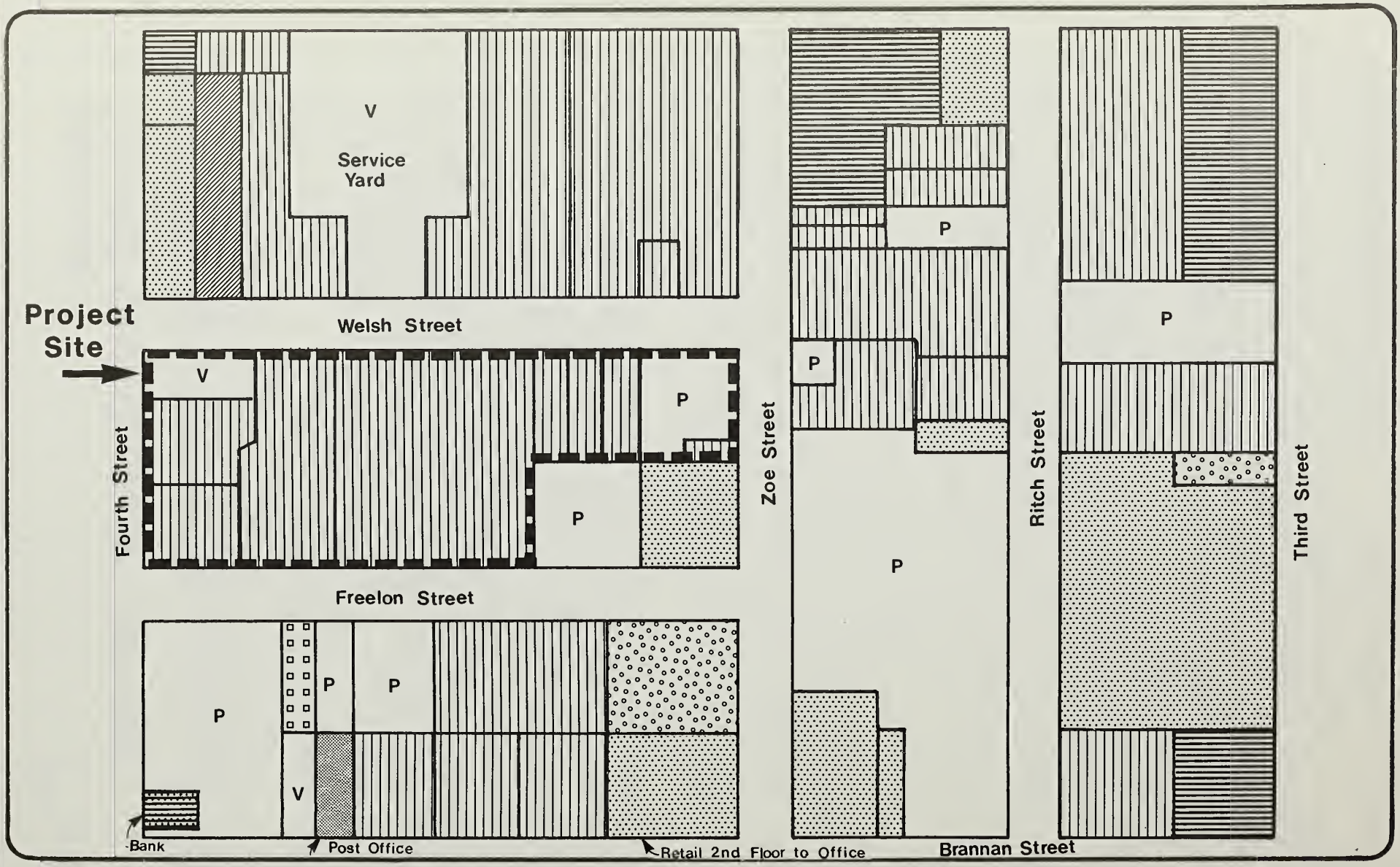
the structure of the San Francisco economy toward a greater service sector orientation, combined with the initiation of several major urban redevelopment projects have cast doubt over the South of Market's continuing viability as a home for industrial activity.

The development of substantial quantities of new office space in the traditional downtown financial district of San Francisco is hampered by the lack of available sites and the high land prices. The South of Market area offers close proximity to the traditional financial district as well as lower land prices. As a result, modern office development has expanded into the South of Market district. In addition, older attractive industrial buildings with reuse potential are being converted into office space.

Two major public urban redevelopment projects, the Yerba Buena Center and the Rincon Point-South Beach Complex, would have an effect on changing land uses in the South of Market District. The Showplace Square Complex in the vicinity of Division and Kansas Streets and the decision of the Southern Pacific Company to convert the Mission Bay railroad yard into combination of office, commercial and residential uses represent additional trends of office and commercial development in the South of Market area.

The area is characterized by a mix of industrial, commercial and office support uses, with light industry the dominant use (Figure 13, page 26). To the west of the project site are the elevated lanes of the James Lick Skyway, with an exit ramp coming down onto Bryant Street at Fourth Street. To the south, commercial uses such as banks and restaurants line Fourth Street. U.S. Postal Service and Pacific Telephone and Telegraph offices face onto Brannan Street. Small private offices and artists' studios are scattered among the light industrial and commercial uses; these are usually located in the upper stories of the structures. The largest office use in the area is the United Vintners, Inc./Heublein Wine Group building, at the corner of Fourth and Brannan Streets. On-street parking is provided on all the streets bordering the proposed project site.

The project site is occupied by 2 vacant warehouses, a vacant industrial building, and a sheet metal shop. The northwestern corner of the project site is a vacant lot enclosed by a chain-link fence.



North
No Scale

Land Use

- Storage
- Light Industry/Warehouse
- Office
- Retail
- Parking Lot
- Public Service
- Commercial
- Vacant Lot
- Residential

Figure No. 13

B. VISUAL ANALYSIS AND URBAN DESIGN

The proposed project area is characterized by small scale, modest buildings of 1 to 2 stories (Figure 14, page 28). The tallest structures noted are 4 stories. The styles, materials and colors of nearby structures vary from the high degree of ornamentation, rich colors, contrasting trims and wood frame construction of the Victorian era to utilitarian red-brick buildings which have little ornamentation except for the definition of the cornice[1] or outline of the building.

The gridiron pattern common throughout the area is broken into smaller sub-blocks by alleys, such as the 3 alleys bordering the project site. The alleys reduce the scale of the area, and provide service access to industries and shops that face onto Bryant, Fourth and Brannan Streets as well those enterprises on Zoe, Welsh and Freelon Streets. Vegetation is limited to street trees along Fourth Street and freeway off-ramps.

There is little of visual interest to pedestrians. The few retail establishments along Fourth Street are the only structures with windows in the lower stories. Most of the structures that face onto the project site present a blank facade or corrugated metal doors to people passing by. The narrow width of the alleys around the proposed site results in cars parking on the sidewalk, forcing the pedestrian into the street as well as obstructing views into adjacent shops.

The proposed site currently contains 4 structures and a parcel of fenced open space. Two of the structures are vacant 2-story brick warehouses with pitched roofs hidden behind a facade with a distinctive curved roofline treatment reminiscent of the turn-of-the-century Mission Revival style of architecture. This skyline treatment is echoed in the adjoining single-story reinforced concrete service/industrial building which is also vacant. The fourth structure is a corrugated metal structure used as a sheet metal shop.

The terrain around the proposed site is flat; from the site there are typical urban views of buildings and streets. Most views are closed in by the presence of freeways to the east and west down Fourth Street and by the buildings which terminate all 3 of the alleys which border the proposed site. The only distant view is to the north over the freeway, offering a glimpse of the south end of a group of high rise structures on Market Street.

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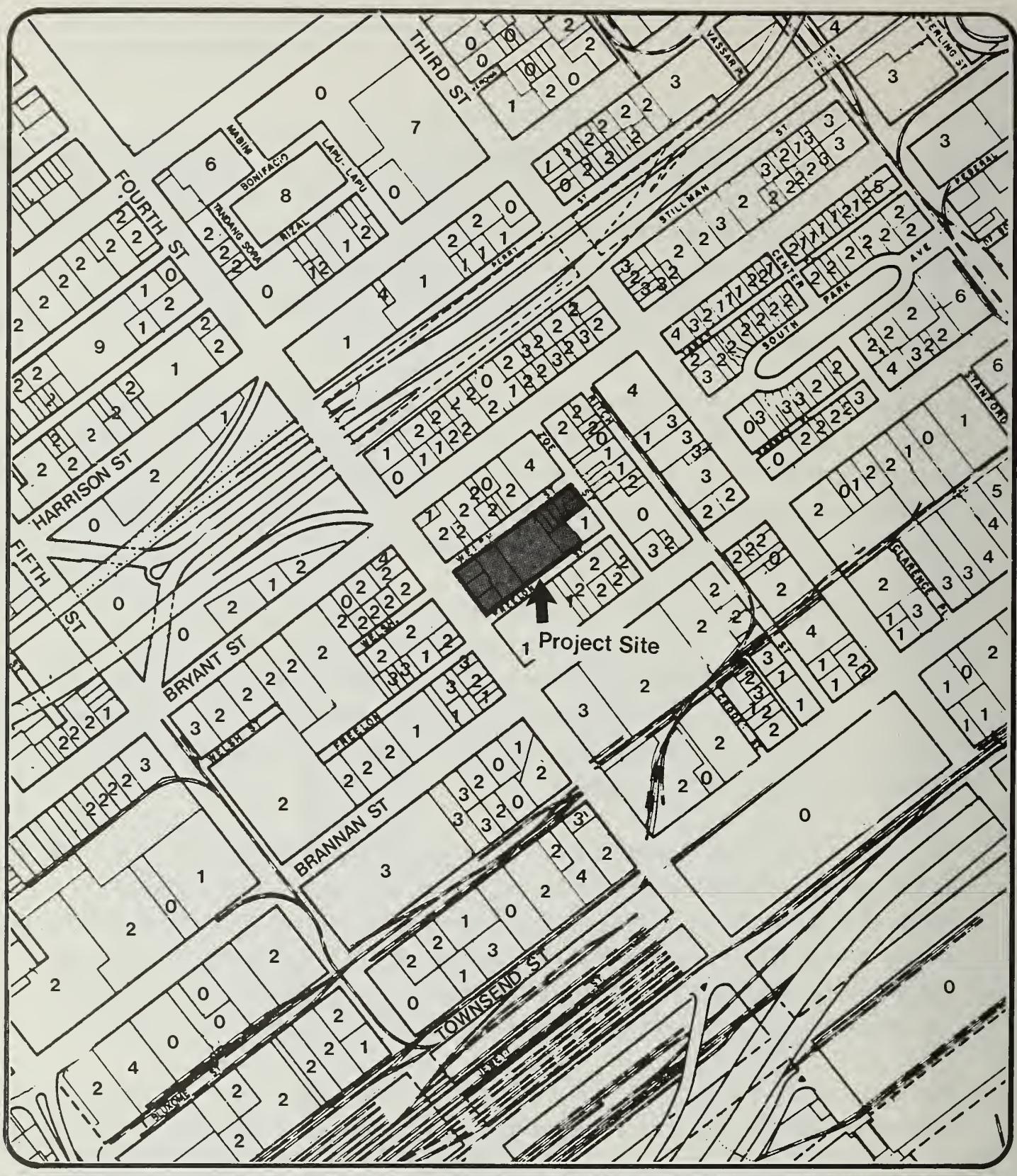
[1] Cornice: the horizontal projecting member at the top of a wall or exterior elevation.



Building Heights in Project Vicinity

(In Stories)

North

0 200 400 800

Scale Feet

Source: EIP Corp

Figure No. 14

C. TRANSPORTATION

1. Street System

The project site has freeway accessibility to/from the East Bay and Peninsula (Figure 15, page 30). The most direct freeway access is at the I-80 on- and off-ramps along Harrison and Bryant Streets. Peninsula access also includes the I-280 off-ramp on Third Street. Automobile accessibility to/from the North Bay is less direct and therefore subject to a more dispersed travel pattern. The most probable routes for North Bay travel are via The Embarcadero (to Broadway, Bay, etc.) or via I-80 or surface streets to the U.S. Highway 101 corridor (Van Ness, Franklin, etc.).

The local street network (see Figure 15) is characterized by the major east/west routes of Folsom, Harrison, Bryant and Brannan Streets and the major north/south access routes of Second, Third, Fourth, Fifth and Sixth Streets. The Transportation Element of the San Francisco Comprehensive Plan designates all the foregoing streets (with the exception of Harrison and Bryant Streets) as Major Thoroughfares in the project area.[1] A more detailed map of the project area streets and sidewalks is shown on Figure 15a, page 31.

The Transportation Element also designates Second, Third, and Brannan Streets as "Transit Preferential Streets in the project area." By definition, priority is given to transit vehicles over automobiles on these streets.

2. Transit

Transit routes in the vicinity of the project site are shown in Figure 16, page 32. Within 2,000 feet of the project site, local service is provided by the San Francisco Municipal Railway (MUNI) and regional service is available via Golden Gate Transit (GGT) and Southern Pacific (SP). Regional service on BART, AC Transit, San Mateo County Transit and Greyhound is available via transfer from MUNI lines.

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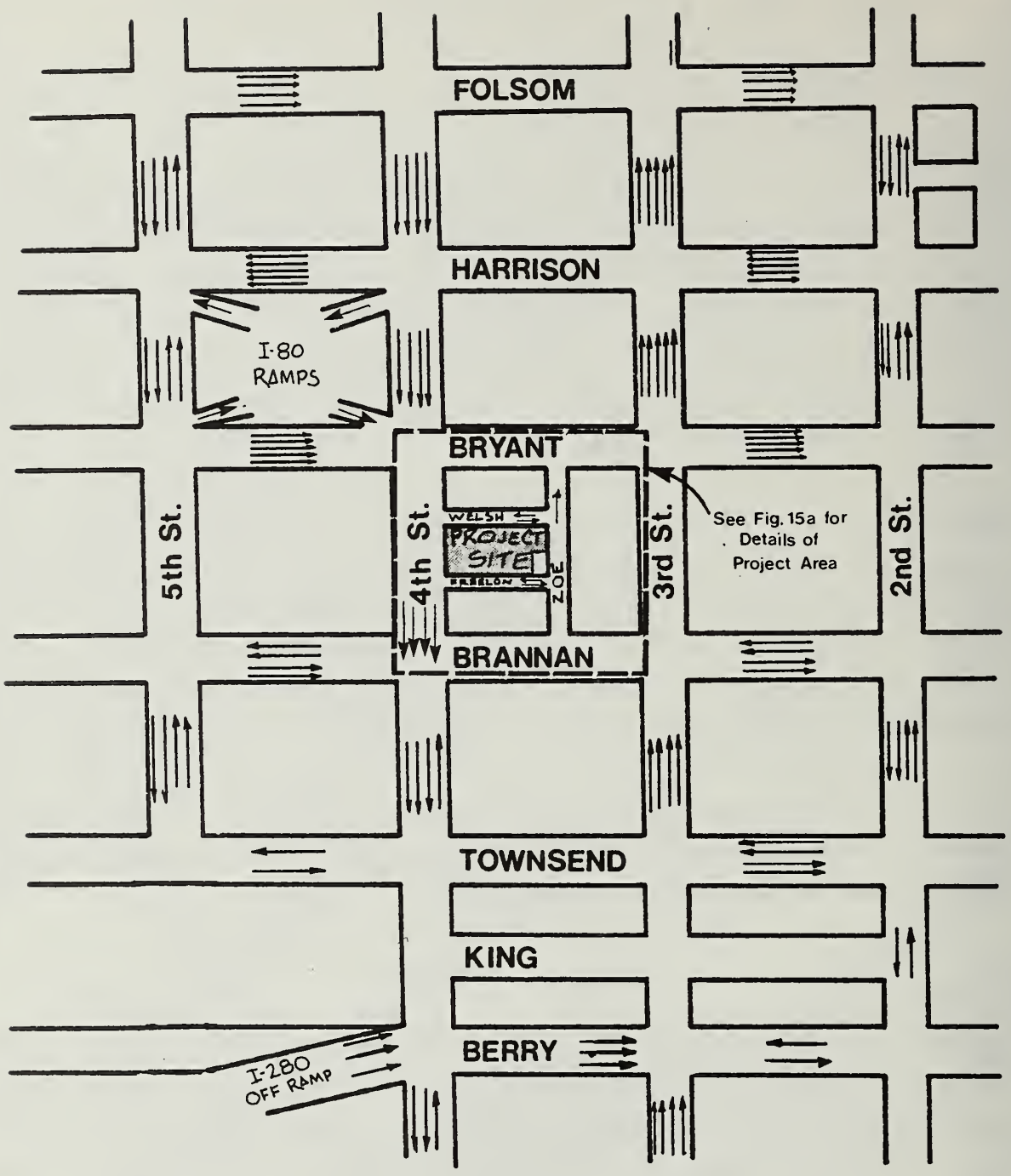
[1] Major Thoroughfare is defined as a cross-town street whose primary function is to link districts within the City and to distribute traffic from and to the freeways; a route generally of city-wide significance, as defined in the Thoroughfare Plan of the Transportation Element of the San Francisco Comprehensive Plan.



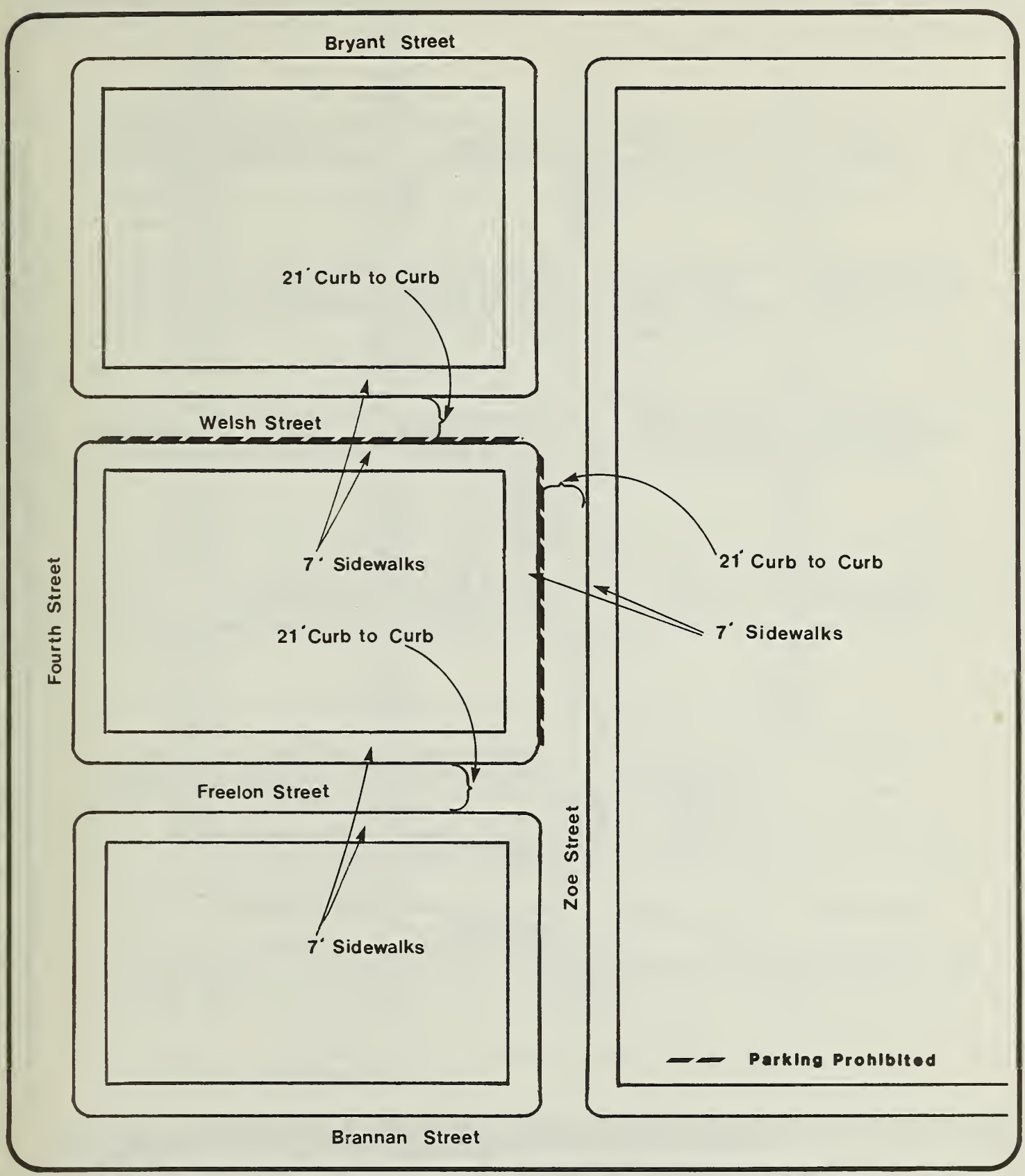
Existing Street Network

North

Not to Scale

Source: EIP Corp.

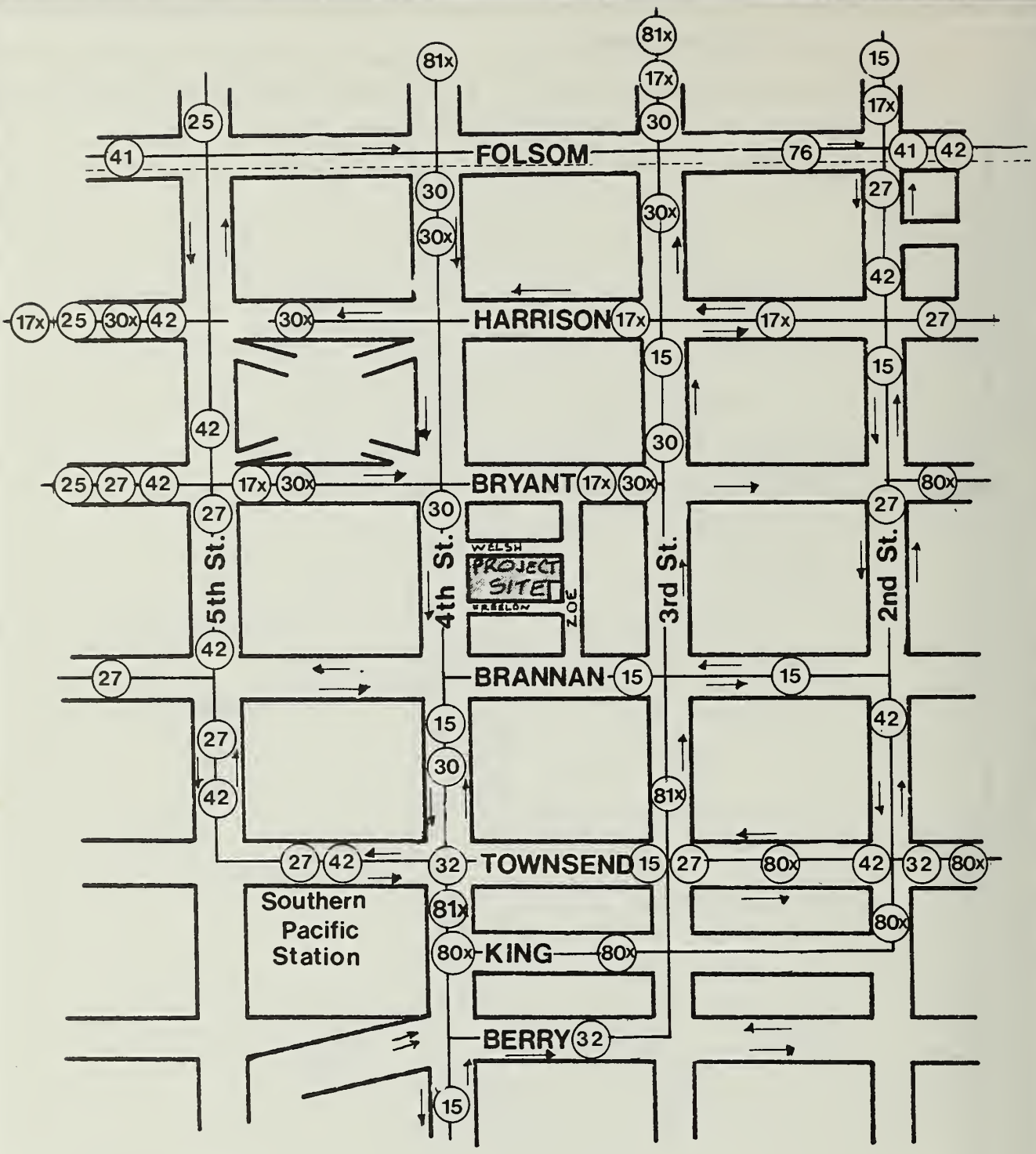
Figure No. 15



Detail of Existing Streets/ Sidewalks

North
No Scale

Figure No. 15a



Existing Transit Routes

North

Not to Scale

TRANSIT ROUTES

—(15)— Muni Route

--------Golden Gate Transit Route

Source: EIP Corp.

Figure No. 16

3. Parking

The project site is outside the "Downtown Commercial District". As outlined in the Comprehensive Plan.[1] There are no specific Plan policies covering the project site.

The project site is included within Parking District III as outlined in the planning document Guiding Downtown Development.[2] The purpose of Parking District III is to establish short-or long-term parking facilities to accommodate shopping, business or commuter trips to the downtown pursuant to the objectives and policies of the Transportation Element of the Master Plan. The project site is also within an area designated as a potential peripheral parking site.[2] Peripheral parking facilities would be intended for commuter use and would be linked to downtown by transit shuttle service.

A parking occupancy review[3,4,5] has been compiled for the project area (bounded by Folsom, Berry, Second and Fifth Streets). Within the area, 3,070 public spaces are available in 24 off-street parking facilities (Figure 17, page 34). Average occupancy (during the midday) for the various facilities is about 80%.

There are no on-street truck loading zones adjacent to the project site.

4. Pedestrian and Bicycle Access

Figure 18, page 35, presents the 2-way pedestrian flows on sidewalks and crosswalks near the project site. The existing flows are open (see Table 12 page 79 for discussion of pedestrian flow characteristics).

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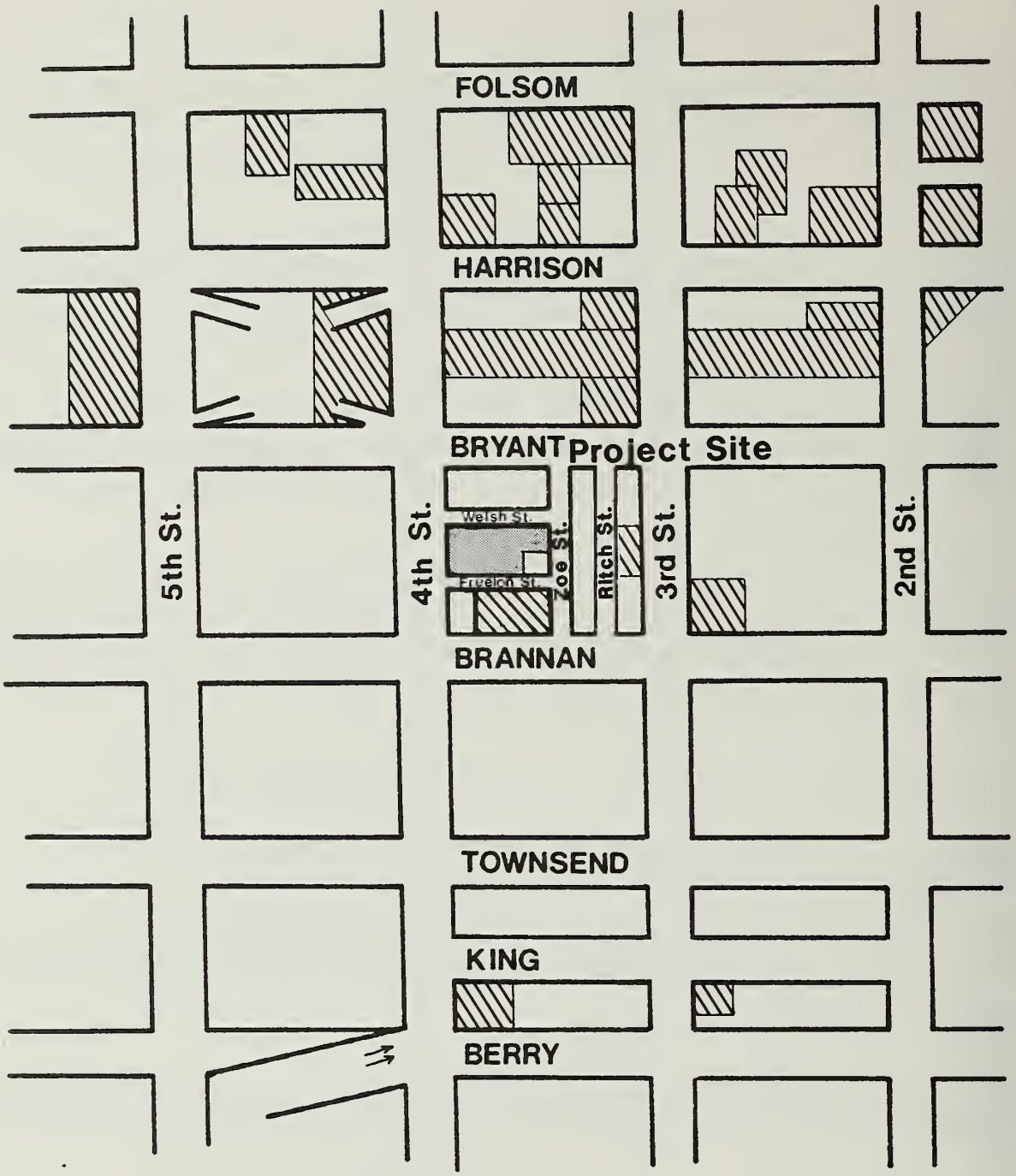
[1] San Francisco City Planning Commission Revisions to the Transportation Element of the Master Plan Regarding Parking, adopted by the Planning Commission on January 20, 1977.

[2] San Francisco Department of City Planning, Guiding Downtown Development, San Francisco, May 1981, page D.6.

[3] San Francisco Department of City Planning, Environmental Assessment Study of the Proposed New Office Building China Basin, EE 80.276, 18 May 1981.

[4] San Francisco Department of City Planning, Final EIR, Five Fremont Center, EE 80.268, Certified 12 March 1981.

[5] Field observations conducted by EIP on 6 May 1981.



Existing Parking Facilities

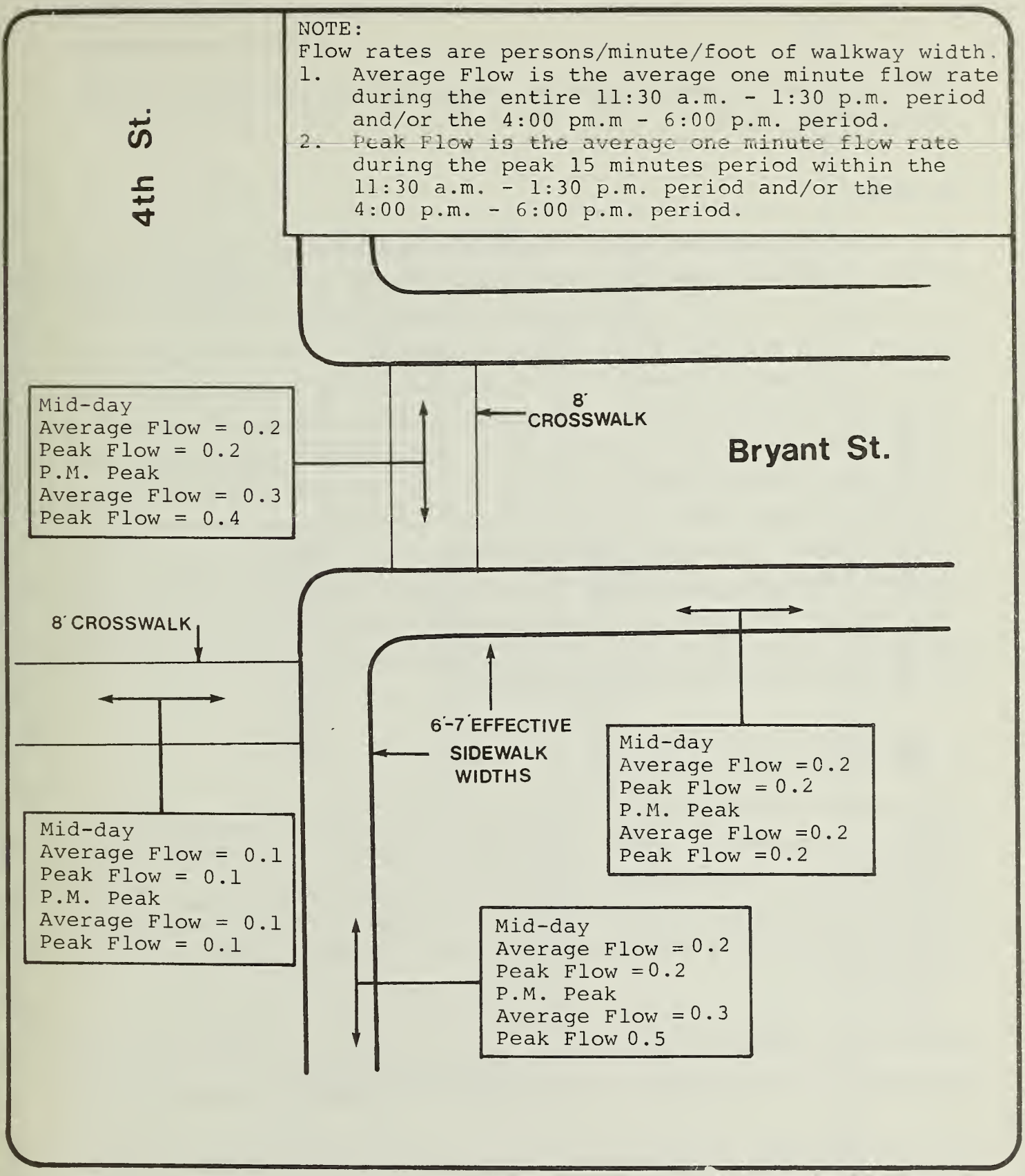
North

Not to Scale

Off-Street
Public Lot

Source: EIP, Corp.

Figure No. 17



Existing Pedestrian Conditions*

North

Not to Scale

*Pedestrian flow standards are given in Table 12, page 79, of this EIR.

Source: EIP Corp.

Figure No. 18

In the vicinity of the project site, the City's Master Plan designates Brannan and Berry Streets as bicycle routes.

D. NOISE

Predominant land uses in the vicinity of the project site are light industrial, warehousing, and commercial/retail. Other uses are scattered residences and a restaurant. Because the buildings in this area are older, they depend on open windows for ventilation; however because it is generally cool in San Francisco, windows are usually kept closed. When closed, the windows reduce exterior noise levels by about 20 dBA (refer to Appendix C for a discussion of the fundamental concepts and terminology of environmental noise). To determine the existing noise environment in the vicinity of the proposed project, noise measurements were made along Fourth, Zoe, Freelon, and Welsh Streets at distances equivalent to typical building setbacks in these areas. Measurement sites are shown in Figure 19, page 37; data obtained during the survey are given in Table 1, page 38. Noise levels are lowest along Freelon Street where the average noise level is an Leq of 61 dBA during the day.[1] The highest average noise levels were measured on Fourth Street where daytime noise levels reach an Leq of 68 dBA. Typical maximum noise levels in the area due to truck and buses passing by reach 78-89 dBA.

E. AIR QUALITY AND CLIMATE

San Francisco's persistent summer winds and its upwind position with respect to major pollutant sources continue to give it possibly the cleanest air in the Bay Area. Despite these advantages, there are periods, usually in fall and winter, when the air is stagnant and the entire Bay Area has poor air quality. In 1980, only the standard for suspended particulates was exceeded in San Francisco; the other 5 measured pollutants were below the standards.[2]

Although San Francisco's air quality is better than most locations in the Bay Area, state and federal standards are not met in the Bay Area (Table 2, page 39). This has resulted in

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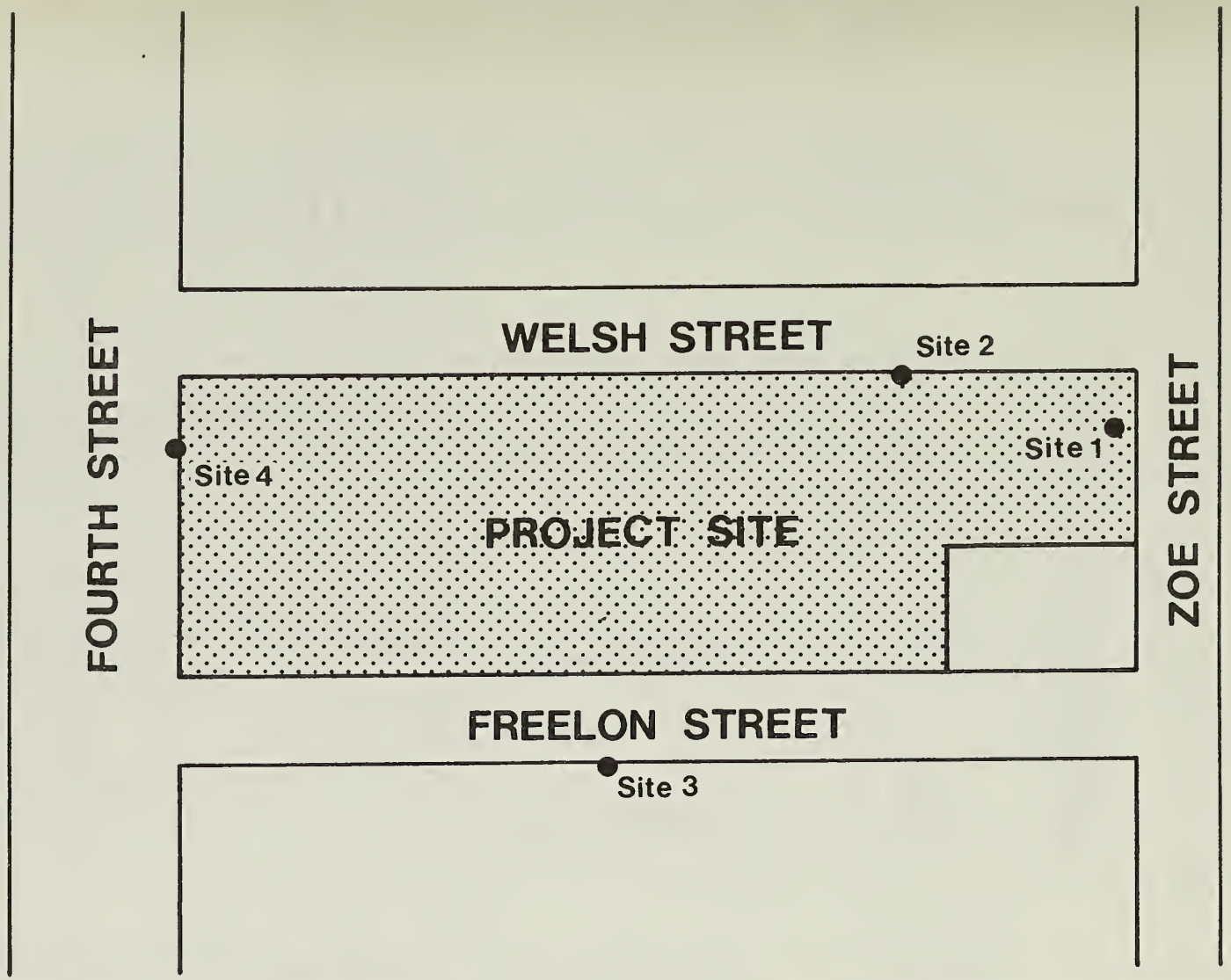
[1] Ldn, the day-night average noise level and dBA, the measurement of sound in units of decibels (dB), are discussed in Appendix C, page A-45.

[2] Bay Area Air Quality Management District, Air Currents, Vol. 24, No 3, March 1981.



North

Noise Measurement Locations

Figure No. 19

SOURCE: Charles M. Salter Assoc. Inc.

TABLE 1

Noise Measurement Results

Site	Location	Day and Time of Measurement	L_1*	L_{10}	L_{33}	L_{50}	L_{90}	L_{99}	L_{eq}**
1	Zoe Street 50 feet from curb of Welsh Street 4 feet from curb of Zoe Street	9/17/81 Wednesday 10:12 am-10:22 am	71	65	61	60	58	57	62
2	Welsh Street 130 feet from curb of Zoe Street on curb of Welsh Street	9/17/81 Wednesday 10:29 am-10:39 am	76	63	59	59	57	57	66
3	Freelon Street 200 feet from curb of Fourth Street 6 feet from south curb of Freelon Street	9/17/81 Wednesday 11:00 am-11:10 am	68	61	59	58	56	55	61
4	Fourth Street 55 feet from south curb of Welsh Street on curb of Fourth Street	9/17/81 Wednesday 11:24 am-11:34 am	78	71	67	65	61	59	68

*The sound level in dBA that was equaled or exceeded 1 percent of the time; L_{10}, L_{33}, L_{50}, L_{90}, and L_{99} are the levels equaled or exceeded 10, 33, 50, 90, and 99 percent of the time, respectively.
**The L_{eq} is the equivalent steady-state sound level that, in a stated period of time, would contain the same acoustic energy as the time-varying sound level during the same time period.

charles m. salter associates, inc.

TABLE 2

Number of Days Selected Pollutants Exceeded State or Federal Standards, 1980[1]

Monitoring Site	Ozone[2]	Nitrogen Dioxide	Carbon Monoxide	Suspended Parti-culates	Sulfur Dioxide
San Francisco (900-23rd St.)	0.0	0	0	6	0
Redwood City	0.8	0	0	1	0
San Jose	6.2	1	15	15	0
San Rafael	0.7	0	0	1	0
Fremont	5.6	0	0	8	0
Livermore	2.2	0	-	9	0

[1] The state standards are specific concentrations and durations of air pollutants that reflect the relationship between concentration and undesirable effects. They are target values, and no timetable exists for their attainment. The federal primary standards represent levels of air quality necessary for protection of public health, with an adequate margin of safety. The provisions of the Clean Air Act as amended in 1977 require that by 1982 the federal standards should not be exceeded more than once per year. Extensions to 1987 are available for CO and ozone under certain circumstances.

[2] Ozone exceedances are averaged over a 3-year period. A 3-year average of 1.0 or less is considered to comply with the federal standard; other pollutants are treated on an annual basis.

Source: Bay Area Air Quality Management District, Air Currents, Vol. 24, No. 3, March 1981.

the development of the 1979 Bay Area Air Quality Plan, which is the Air Quality Maintenance Plan (AQMP) for the Bay Area, as part of the Environmental Management Plan (EMP) prepared by the Association of Bay Area Governments (ABAG) and other government agencies.[1] After modification, this plan has been incorporated into the State Implementation Plan. The AQMP contains a strategy for the long-term attainment and maintenance of air quality standards. The Plan includes measures to reduce emissions from stationary sources and automobiles, and transportation controls. The air quality problems addressed in the AQMP are photochemical oxidants, carbon monoxide, and suspended particulates.

Winds in San Francisco are generally from a westerly direction and are persistent from May to August. During the rainy season (October to April) the strongest winds flow from the south as well as from the west and northwest. The project site is exposed predominantly to the prevailing northwesterly winds.

F. ENERGY

The project site is occupied by 3 vacant structures and 1 occupied structure. Estimated energy consumption is 60 million BTU per year for electricity and natural gas.

G. EMPLOYMENT, HOUSING, FISCAL CONSIDERATIONS

1. Employment

At present, 3 people work at the proposed project site. Most of the buildings have been vacant for several years. Estimates of the residential location patterns of workers in the City indicate that about 40% to 45% reside in San Francisco, 25% to 30% in the East Bay, 11% to 18% on the Peninsula, and 12% to 19% in the North Bay (Table 3, page 41).[2]

This average pattern may change over time if residence patterns of workers newly employed differ from those of previously employed workers. Estimates indicate that while the average pattern for office workers shows about 40% to 45% residing in San Francisco,

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[1] Association of Bay Area Governments, 1979 Bay Area Air Quality Plan, January 1979.

[2] The data from various sources in Table 3 are not directly comparable, primarily because of differences in the types of respondents surveyed. Overall, it appears that the percentages of downtown office jobs held by San Francisco residents are lower than the corresponding percentages for all types of jobs in San Francisco or in the Civic Center area.

TABLE 3

COMPARISON OF RESIDENTIAL PATTERNS FOR EMPLOYEES IN SAN FRANCISCO

Place of Residence	U.S. Census[1]	DCP Transportation Section[2]	MTC BART Survey[3]	SPUR[4]	EIR Data[5]
San Francisco	60%	58%	52%	40%	40%
Peninsula	17%	14%	19%	13%	18%
East Bay	13%	20%	18%	24%	30%
North Bay	8%	8%	8%	19%	12%
Elsewhere and Not Reported	2%	--	--	4%	--
Area Covered	All of San Francisco	Civic Center Area	Downtown Areas Near BART Stations	Greater Downtown Area	Selected Downtown Office Bldgs.
Employees Covered	All Employees	Government Employees	All Employees	Office Workers	All Employees of 4 Firms & the Federal Reserve Bank
Date	1970	1978	1977	1974	1978-79

Source: Recht Hausrath and Associates

[1] 1970 U.S. Census of Population, Journey to Work, Table 1.

[2] Survey of government employees within about a 3-block radius from City Hall, conducted by Department of City Planning (DCP) Transportation Section, 1978.

[3] Metropolitan Transportation Commission (MTC) data on employees working within a 10-15 minute walk or bus ride from downtown BART stations. From 1977 Work Travel Survey for BART Impact Program.

[4] From a survey of 1,022 office workers employed by 41 different firms located in the area bounded by Van Ness, Broadway, The Embarcadero, and Bryant Street. San Francisco Planning and Urban Research Association, Impact of Intensive High-Rise Development on San Francisco, 1975, p. 110.

[5] Weighted average of expected employees in the Federal Reserve Bank (EE 78.207), 101 California Street (EE 78.27), Pacific Gateway (EE 78.61), and Crocker National Bank (EE 78.298). From 456 Montgomery Street Draft EIR (EE78.178), p. 126. See 101 Montgomery FEIR (EE 80.26), p. 293.

only 25% to 35% of office workers newly employed over the 1980-1990 period are likely to be San Francisco residents.[1] Since the number of newly employed people is small relative to the total number of employees, the average percentage of San Francisco residents working in the downtown and South of Market area changes slowly over time.

Bay Area office employment now represents just over one-half of the region's total work force. Since 1970, office employment has accounted for 60% of the Bay Area and San Francisco employment growth.[2] San Francisco occupies a position as one of the country's major financial and corporate headquarters centers.

Consistently low vacancy rates and rapidly rising rents in the downtown area suggest that demand for space is strong and that the construction of new office space in San Francisco has failed to keep pace with growing demand. Because of this backlog, demand for office space in the next several years will continue to reflect both the growth of office employment and the cumulative shortage of space that now exists (see Appendix D, page A-51.).

2. Housing

There are slightly over 2 million housing units in the 9-county Bay Region according to the 1980 Census. About 15% of the single-family dwellings, the most prevalent type of housing, are in San Francisco.[1] There has been, however, a strong increase in the percentage of multi-family housing units (including townhouses, condominiums and apartments).

[1] Based on data prepared by Recht Hausrath and Associates for 101 Montgomery Street FEIR, EE 80.26, certified 7 May 1981, Appendix C, pp. 289-299.

[2] Association of Bay Area Governments and Bay Area Council, San Francisco Bay Area Economic Profile, December 1979, pp. 37-48.

[3] U.S. Department of Commerce, Bureau of Census, 1980 Census of Population and Housing (Advanced Reports: California (PHC80-V-6), Final Counts, March 1981.

The City had about 322,300 housing units as of the end of 1980. About two-thirds of the stock is rented and one-third is owner-occupied.[1]

The average 1980 market value of a house in the Bay Area was $140,000 and $148,00 for San Francisco, which had the greatest increase over the past 5 years.[2] Table 4, page 44, indicates recent ranges of housing purchase prices and rental rates by type of unit. The vacancy rate is low, estimated at 2.68% for the total housing stock.[3]

Although the number of housing units and households increased 3% from 1970 to 1980, the City's population decreased 5% over that period and the number of persons per housing unit declined 8%.[4] The share of San Francisco's employed population that works in the City has increased. San Francisco residents working outside the City have either moved closer to where they work, or they have found jobs in the City. If they move out of the City, they are likely to be replaced by someone who works in the City (since most employed residents work in the City), thereby increasing the percentage of employed San Franciscans who work in the City.[5]

3. Fiscal

The proposed project site contains 1 parcel (lot 119) in Assessor's Block 3776. The assessed value of the site for the fiscal year 1980-1981 was $1,314,479. At the 1981-1982 tax rate of $1.19 per $100 of the assessed value, the site generated about $15,600 in

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[1] Department of City Planning, Residence: Changes in the San Francisco Housing Inventory, 1978, September 1979. Figures for 1979 and 1980 are from Department of City Planning records, Joan Carson, telephone conversation, 9 July 1981.

[2] Real Estate Research Council of Northern California, Northern California Real Estate Report, Vol. 33, No. 1, April 1981.

[3] The 2.68 vacancy rate is reported by the Bureau of the Census for 1980 and is currently used by the City Planning Department.

[4] San Francisco Department of City Plannning, 101 Montgomery Final EIR, EE 80.26, certified 7 May 1981, Appendix C. Recht Hausrath and Associates, p. 289-299.

[5] Linda Hausrath, Recht Hausrath and Associates, telephone conversation, 11 September 1981.

TABLE 4

HOUSING PRICES IN SAN FRANCISCO, 1981

Rentals: Median Monthly Rent[1]	
Studio Apartment	$ 440
1-Bedroom	500
2-Bedroom	560
3+ Bedrooms	590
1980 Census Median Monthly Rent (median number of room is 4.0[2]	310
Purchase: Average Sales Price	
New Single Family[3]	$ 155,500
Existing Single Family[4]	148,000
Condominium (New and Existing)[5]	112,760
Medium value of owner occupied dwelling (median number of rooms is 4.0)[6]	120,700

[1] Mike Estrada, Department of City Planning, telephone conversation, 17 December 1981. Result of 1981 survey of rental advertisements in the San Francisco Examiner. Newspapers are not statistically valid sources because they are not representative of entire stocks of units, they can, however, provide a general indication of rents.

Two other sources of rental data exist but have been deemed inadequate for the present study: 1) HUD develops rental costs for the Section 8 housing subsidy program. These estimates reflect SMSA data which have been indexed forward from the 1970 census, and benchmarked with the Annual Housing Survey, which is published with at least a year time-lag; 2) the Citizens' Housing Task Force has developed hypothetical rental levels based on multi-family construction cost. However, new units represent a very small segment of the San Francisco rental market.

[2] Based on preliminary data from the 1980 census (100% sample) of $266 per unit in April 1980. Selected Housing Characteristics by States and Counties: 1980, Bureau of Census 1981. The median rent was idexed to 1982 based on the Consumer Price Index of 15.4%.

[3] New single family housing price given in: Department of City Planning Housing Element, Background Data and Need Analysis, vol. 33, no. 1, page 8; 1981 index given by James H. Davis, Executive Director, telephone conversation, 17 December 1981.

[4] Real Estate research Council of Northern California, op. cit., page 4.

[5] Based on average loan amount over the first 3 quarters of 1981, as reported in: California Department of Savings and Loan, "Loan Summary Analysis," line 26. Assumes a 20% down payment.

[6] Based on 1980 Census of 104,600 bfor median owner-occupied housing price indexed to $120,700 1982 based on the Consumer Price Index of 15.4%

property tax revenues.[1] This is distributed to: The City and County of San Francisco (79.3%, about $12,402); The San Francisco Unified School and Community College Districts (14%, about $2,200); BART (6.3%, about $980, mostly for bond payments): and the Bay Area Air Pollution Control District (0.04%, about $6).

The City may incur some costs to the project site in servicing the existing buildings, although the site is largely vacant. Police, fire, and general government expenditures are supported primarily by the General Fund. Most street maintenance, street improvement, and traffic control costs have been supported by other revenue sources such as fines, and federal and state aid.

[1] Of the total tax, $13,100 represents the maximum allowable under Proposition 13 per general government expenditures ($4.00 per $100 of 25% of the assessed valuation), and $2,900 was levied to finance bond obligations previously approved by the general electorate (0.92 per $100 of 25% of the assessed valuation).

IV. ENVIRONMENTAL IMPACTS

A. ISSUES NOT ADDRESSED

An Initial Study (see Appendix A, page A-1) was prepared for the proposed Welsh Commons Project to identify potential environmental issues resulting from the project.

Potential environmental issues of the proposed project that have been determined to be insignificant, and therefore will not be addressed in this EIR are:

Noise: After project completion, audible noise levels in the project vicinity would not increase due to compliance of the mechanical system with the City noise ordinance.

Air Quality: The proposed project would create no objectionable odors. There would be no burning of any materials. The project, per se, would not affect the quality of air in the City or region.

Public Services and Utilities: The increased demand for public services and utilities generated by the proposed project is not expected to require additional personnel or equipment.

Topography/Soils/Geology: The proposed project is not expected to have an effect on the site's topography, soils, or geology.

Biology: The proposed project would not have an effect on plant or animal life on the development site or surrounding sites.

Hazards: The proposed project would not be affected by hazardous uses or health hazards in the area nor would it have a potential for health hazards.

Cultural: There is no known archaeological resource potential on the site. If any artifact, structural remnant, or other type of archaeological resource were found during excavation, mitigation measures included in the report would be implemented.

B. LAND USE

The proposed project would be a mixed use development containing condominium units, light industrial space, retail space, service/wholesaling space and parking totalling approximately 408,000 gross square feet. Existing uses on the site would be removed prior

to construction of the proposed project. The existing use on the southeast corner of lot 119, Block 3776 would not be affected by the development.

The introduction of residences on the project site represent a new use for the immediate project area which is largely industrial/wholesaling. The 265 parking spaces would be available for residents and employees of the project site.

The proposed project would not conform to existing zoning regulations. The height of the development would be 105 feet, 55 feet above the existing height limit. The nearest residential area is RC-2 which allows a density of one unit per 600 square feet. The proposed project has a density of one unit per 404 square feet, which is allowable under the guidelines set forth in the City Planning Code regarding Planned Unit Developments (PUD).[1] The maximum number of units allowable on the site under a PUD would be 161 units or 107 dwelling units without a PUD.

The proposed project site is in an area that is recommended by the San Francisco Planning and Urban Research Assocation[2] and the Department of City Planning's proposed South of Market Interim Controls[3] to be reserved for industrial uses and restrict office and housing uses.

The project would comply with the following objectives and policies of the Residence Element of the Comprehensive Plan:[4]

> "Objective 2: Encourage new residential development only when it preserves or improves the quality of life for residents of the City and provides needed housing opportunities.

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[1] City and County of San Francisco Planning Code, Section 209.1 (j) and 304 (d), 1979 Edition.

[2] SPUR, South of Market: A Plan for San Francisco's Last Frontier, June 1981, page 46.

[3] San Francisco Department of City Planning, South of Market Interim Controls, 25 January 1982, page 14.

[4] Department of City Planning, Residence Element for the Comprehensive Plan, Adopted by Resolution No. 7417 of the San Francisco City Planning Commission on 11 December 1975, pages 2 and 3.

"Policy 2: Encourage the conversion of underused non-residential land to residential use, and encourage multiple-residential development in conjunction with commercial uses in the downtown commercial area.

"Policy 4: Encourage construction of a variety of unit types suited to the needs of households of all sizes.

The project would also comply with the following Objectives and Policies of the Commerce Element of the Comprehensive Plan:[1]

"Objective 1: Manage economic growth and change to ensure enhancement of the total City living and working environment.

"Objective 3: Provide expanded employment opportunities for City residents, particularly the unemployed and economically disadvantaged.

"Policy 1: Promote the attraction, retention and expansion of commercial and industrial firms which provide employment improvement opportunities for unskilled and semi-skilled workers."

The proposed project responds to applicable goals and policies stated in the Residence, Commerce and Industry, Community Safety, Transportation, Environmental Protection and Open Space Elements of the Comprehensive Plan. The project does not, however, comply with all Urban Design policies. A discussion of these objectives follow in IV.C.

C. VISUAL ANALYSIS AND URBAN DESIGN

The proposed project would consist of a single structure built around an open air central roof terrace on the second floor. The structure would appear visually divided into 3 parts relating to the type of uses proposed (Figures 4, 5, 6, pages 12, 13, and 14). The first floor would serve as the base of the building. The large storefront windows of the retail and service/wholesaling space, and the arcades formed by the ground floor setbacks along 4th and Freelon Streets would visually separate the first floor from the upper portions of the proposed structure (Figures 7, 8, and 9, pages 15-17). From the exterior, the upper stories of the proposed structure would appear residential in nature, the smaller windows and balconies reflecting residential qualities. The light-industrial space provided at the northern corner of proposed project would appear as a third visual portion. The lack of balconies and variation in window size and placement would visually separate the light-industrial space from the rest of the proposed project.

The arcade formed by the overhanging upper stories along 4th and Freelon Streets would provide overhead shelter and emphasize pedestrian entry into street level retail spaces

[1] Department of City Planning, Commerce and Industry Element of the Comprehensive Plan, Adopted by Resolution No. 8001 of the San Francisco City Planning Commission on 29 June 1978, page 2.

and residences above. Access for residents to the central roof terrace on the second floor would be provided by an interior stair-case to the north of the entrance lobby. The second floor open-air terrace would contain a swimming pool and potted trees and shrubsfor visual interest. An extension of this terrace would occur on the 3rd floor and would be accessible by an open staircase leading up from the 2nd floor. Ten residential patios would open onto the roof terraces. Patio fencing and potted plants supplied by the residents would visually screen these patios from the rest of the rooftop gardens and prevent physical access. The overall design of the residential portion of the project is to be oriented to take advantage of natural sunlight.

Upper floors of the proposed structure would be stepped progressively inward from the 4th Street frontage at higher elevations. Elevator shafts, staircases and mechanical rooms constructed on the building's exterior would provide additional variations in the rooflines of the proposed structure. These variations and setbacks would help reduce the apparent mass of the building's upper stories.

With respect to the building's physical relation to adjacent structures and the downtown environment, there are a number of policies contained in the Urban Design Plan of the San Francisco Comprehensive Plan that would allow further assessment of the project's visual and design effects.[1]

Major New Development Policy #1: "Promote harmony in the visual relationships and transitions between new and older buildings."[2]

Major New Development Policy #2: "Avoid extreme contrasts in color, shape and other characteristics which will cause new buildings to stand out in excess of their public importance."[2]

Major New Development Policy #5: "Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development."[3]

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[1] San Francisco Department of City Planning, Urban Design Plan, adopted by Resolution 6745 of the San Francisco City Planning Commission, 26 August 1971.

[2] Ibid, page 36.

[3] Ibid, page 37.

Major New Development Policy #6: "Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction."[1]

Conservation Policy #6: "Respect the character of older development nearby in the design of new buildings."[2]

The proposed project would partially respond to the intent of Major New Development Policies 1, 2, 5 and 6 and the Conservation Policy # 6. The use of brick as a building material and the integration of service and light industrial uses into the lower stories would reflect the construction materials and land use character of older adjacent structures. However the expanses of glass at the street level would contrast with the windowless walls and fenestration of neighboring buildings.

The size, shape, and height of the proposed structures would also contrast with existing adjacent older structures that are characteristically rectangular to square in shape. The proposed 9-story structure would be the first in the area to be built greater than 50 feet in height and would stand out above the characteristic 1-3 story industrial structures surrounding the project site (Figures 20, 21, and 22, pages 51, 52, and 53). The height of the proposed structure would establish a precedent for development of more mid to high rise structures in the South of Market area.

The use of set backs as the building step up to the 9th floor roof level would help reduce the structure's apparent height and bulk (Figures 23, 24 and 25, pages 54, 55, and 56). The street entries on the bordering streets would also help break the building mass down to proportions more compatible with the surrounding structures. The rectilinear forms of the proposed structure would assist in the visual transition between the proposed and existing structures surrounding the project site.

City Pattern Policy #1: "Recognize and protect the major views in the city, with particular attention to those of open space and water."

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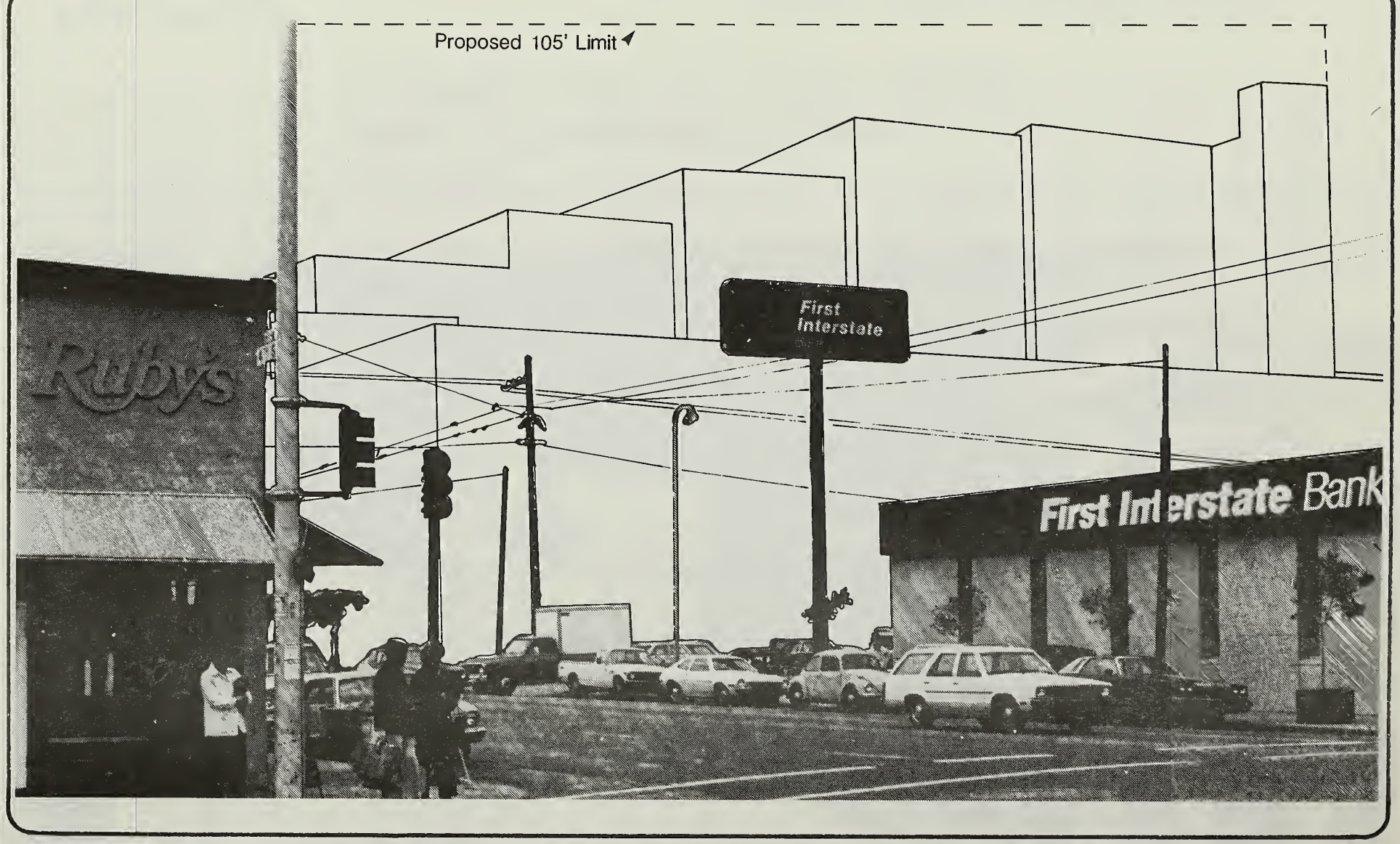
[1] San Francisco Department of City Planning, Urban Design Plan, adopted by Resolution 6745 of the San Francisco City Planning Commission, 26 August 1971.

[2] Ibid, page 25.

View of Proposed Project: Looking north on Fourth Street

Figure No. 20

Source: EIP/Tai Associates Architects



View of Proposed Project: Looking Northeast, corner of Brannan and Fourth Streets

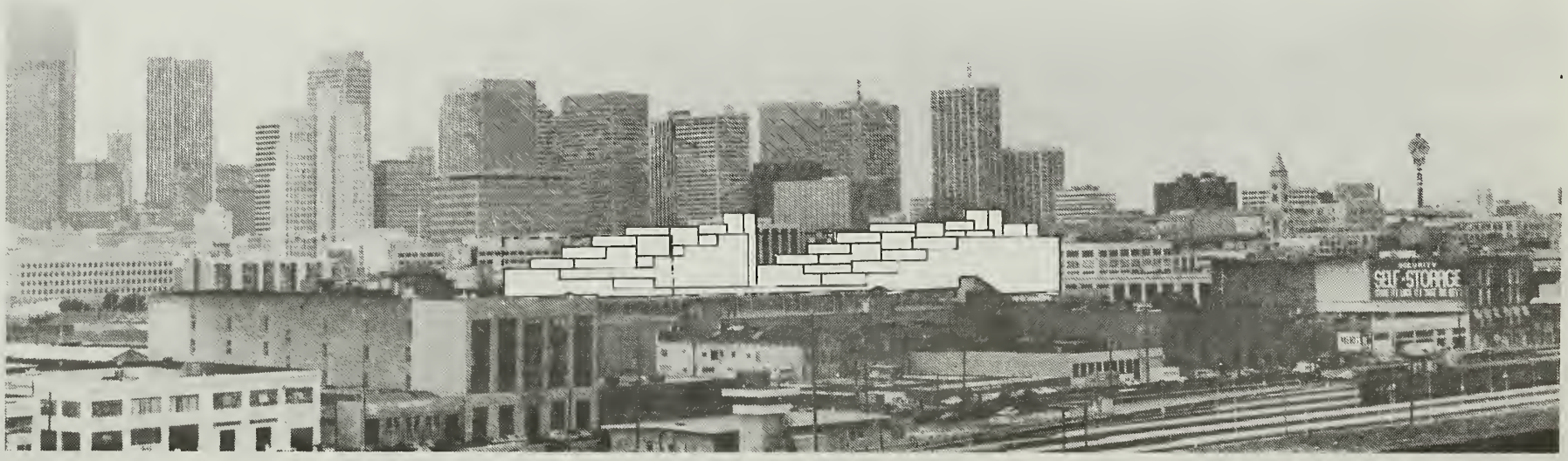
Figure No. 21

Source: EIP/Tai Associates Architects

View of Proposed Project: Looking South, corner of Bryant and Fourth Streets

Figure No. 22

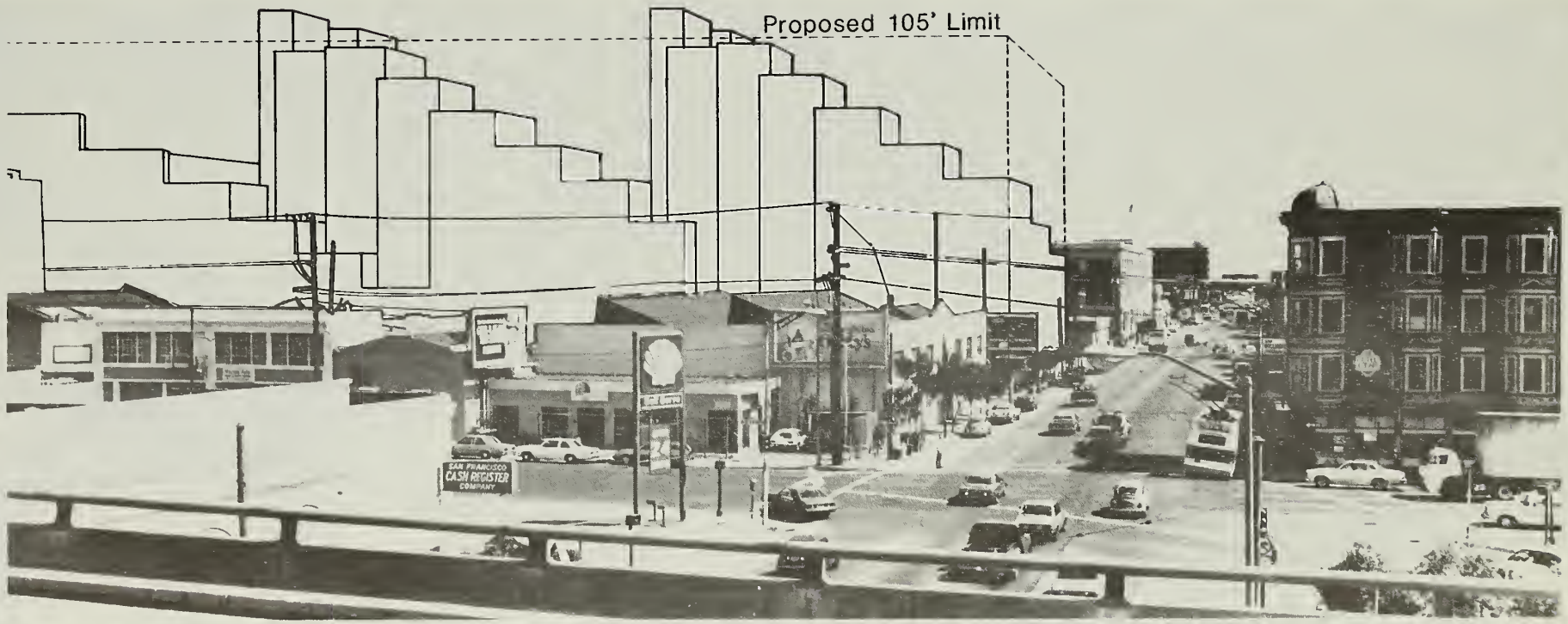
Source: EIP/Tai Associates Architects



View of Proposed Project:
Looking Northeast from Highway I-280

Figure No. 23

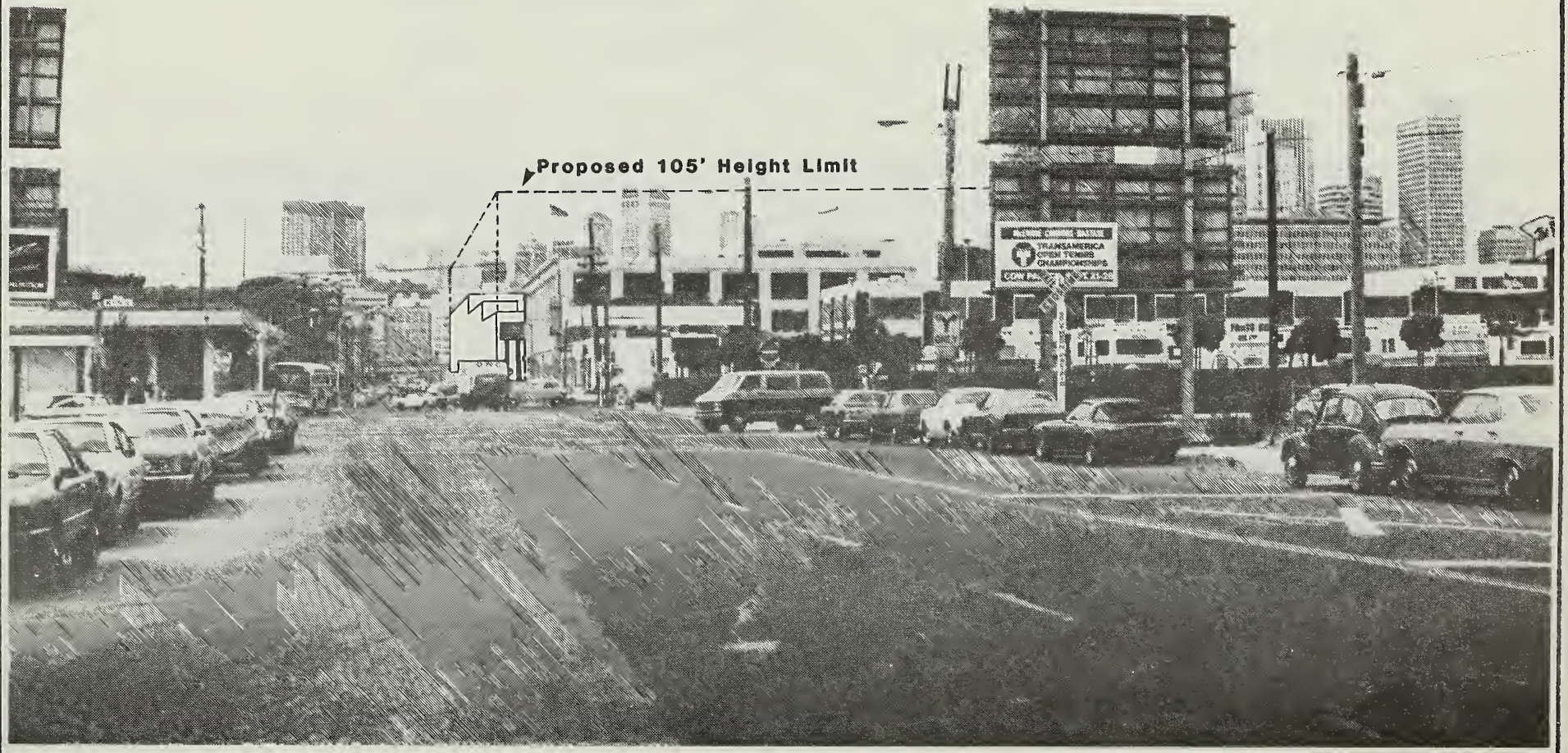
Source: EIP/Tai Associates Architects



View of Proposed Project: Looking South from Highway 101

Figure No. 24

Source: EIP/Tai Associates Architects



View of Proposed Project: Looking North, in front of Southern Pacific Railroad Station

Figure No. 25

Source: EIP/Tai Associates Architects

The proposed project would obstruct views of other structures in the project area from the upper stories of nearby 3 and 4-story buildings. Because of the freeway ramps and taller buildings east of the project site nearer the Bay, which currently obstruct views of the Bay, the proposed building would not be expected to contribute to blocking views toward the Bay from surrounding areas. The proposed project would not protect views and would not fully recognize the intent of City Pattern Policy #1.

Neighborhood Environment Policy #12: "Install, promote and maintain landscaping in public and private areas."[1]

Neighborhood Environment Policy #13: "Improve pedestrian areas by providing human scale and interest."[1]

Neighborhood Environment Policy #14: "Remove and obscure distracting and cluttering elements."[1]

The proposed project would recognize the intent of with Neighborhood Environment Policies 12, 13 and 14. The proposed project would replace visually unrelated, vacant structures, improving the maintained appearance of the site. The project would fill the project site with a unified structure of a common design theme and integrated open space (Figures 26 and 27, pages 58 and 59). Open space would be provided by a central roof garden and pedestrian arcades along 4th & Freelon Streets. The pedestrian arcades, storefront windows and proposed street trees along 4th and Freelon Streets would provide human scale and visual interest to the project area. The proposed project would also provide underground parking thereby removing parked cars associated with the use of the building from public view.

City Pattern Policy #3: "Recognize that buildings when seen together produce a total effect that characterizes the city and its districts."[1]

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[1] San Francisco Department of City Planning, Urban Design Plan, adopted by Resolution 6745 of the San Francisco City Planning Commission, 26 August 1971, page 57.

View of Proposed Project: Looking East, Aerial View

Figure No. 26

Source: EIP/Tai Associates Architects

View of Proposed Project:
Looking Northeast, Aerial View

Figure No. 27

Source: EIP/Tai Associates Architects

Major New Development Policy 9: "Encourage a continuing awareness of the long-term effects of growth upon the physical form of the City.[1]

The building would be seen from vantage points throughout the project area, including Highways 280 and 101 (Figures 23, 24, 25, pages 54, 55 and 56). Cumulatively, the structure would contribute incrementally to the total mass of the buildings defining the San Francisco skyline. From locations south, east and west of the project site (Figures 23 and 25, pages 54 and 56), the project's height and bulk would be seen to relate to the higher skyline profile of buildings in the Financial District and downtown area north of Market Street. The project would also be seen as a new element taking its place in the City's emerging urban form comprised of taller buildings over an increasing land area including the Financial District and South-of-Market area. The structure would be noted as an element stepping down the higher skyline profile of buildings north of Market Street to a lower building height in the South-of-Market area from a number of vantage points, including Potrero Hill.

Current trends indicate that future development of land adjacent or close to the project site would consist of buildings taller than the existing older structures they would replace. New structures would be seen to extend the development pattern of taller buildings north of the project area, closer to the project site and block views to buildings of the Financial District from surrounding areas. Accordingly, it would be expected that the proposed structure would be visually absorbed, in varying degrees through time, into the City's increasingly higher skyline profile.

Light would be noticeable from the proposed project, but this would be tempered by the glass tint, landscaping on the terraces, and interior design features such as curtains and drapes.

D. TRANSPORTATION

An analysis of the transportation impacts of the proposed project must consider the project itself and the cumulative effect of other projects in the downtown area. Trip generation and modal split have been projected for a number of other office and retail

[1] San Francisco Department of City Planning, Urban Design Plan, adopted by Resolution 6745 of the San Francisco City Planning Commission, 26 August 1971, page 40.

developments approved or under formal review in the downtown area.[1] The approved developments included in this analysis would probably be occupied on or before 1983, the estimated occupation date for the proposed project. Because the proposed project's occupation could be delayed beyond 1983, consideration has also been given to the effect of cumulative projects under formal review. Together, the approved and proposed downtown office projects total about 17.7 million square feet. (It should be noted that the total square footage of downtown office projects under formal review by the Department of City Planning fluctuates because projects often undergo design change or may not be approved. Approximately 8.4 million square feet of office space is currently under review for the South of Market area as shown in Appendix Table A-2, page A-53 of this EIR.)

1. Project and Cumulative Trip Generation Distribution

As shown in Table 5, page 62, the proposed Welsh Commons project would generate about 2,800 daily person trips (excluding trips to/from the retail development which would be internal to the project). Approximately 360 of the daily trips would occur during the evening (4:30-5:30) peak hour and 210 would occur during the morning (7:30-8:30) peak hour.

In comparison with the foregoing figures, the projection of cumulative travel for other approved and proposed projects is approximately 62,000 peak hour person trips.[2]

The Welsh Commons project would amount to about 0.6% of the cumulative peak hour generation of these projects.

The estimated modal split for the wholesale, retail service and industrial uses is based upon travel surveys conducted as a part of the Second and Folsom and China Basin projects.[3,4] These surveys suggest that about 40% of the project's wholesale/industrial

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[1] A list of downtown projects which are under construction, have been approved or are under formal review is on file at the Office of Environmental review, 45 Hyde Street.

[2] Based upon the City's guideline of 17.5 daily person trips per 1,000 square feet with 20% of the daily trips during the p.m. peak hour.

[3] San Francisco Department of City Planning, Environmental Assessment Study of the Proposed New Office Building, China Basin, EE 80.276, San Francisco, 18 May 1981, p. 27.(survey was conducted for the existing China Basin Building)

[4] Jon Twichell and Associates, Marathon Second and Folsom Building Transportation Program, July 1981, (on file in Office of Environmental Review, 45 Hyde Street).

TABLE 5

PROJECT TRIP GENERATION IN PERSON TRIPS

Land Use	Daily Trip Rate[1,2]	Daily Trips	P.M. Peak Hr. %	P.M. Peak Hr. Trips	A.M. Peak Hr. Hr.%[1,2]	A.M. Peak Trips
- 145 dwelling units	7/unit	1,015	12%	120	10%	110
- 110 wholesale/service employees (55,600 sq.ft.)[4]	4/emp.	440	20%	90	20%	90
- 19,200 sq. ft. light industrial	7/1000	135	20%	30	16%	20
- 12,000 sq. ft. retail	100/1000	1,200	10%	120	NA	---
	TOTAL	2,790		360		210

Sources:

[1] Institute of Transportation Engineers, Trip Generation, Virginia, 1979 (not paginated).

[2] California Department of Transportation, 10th Progress Report on Trip Ends Generation, San Francisco, July 1975.

[3] California Department of Transportation, 13th Progress Report on Trip Ends Generation, San Francisco, July 1981, page 81.

[4] Assumes 2 employees per 1,000 sq. ft. of wholesale/service area.

trips would be via automobile (with an occupancy of 1.5). Because the project uses would not be office oriented, a range of 40-60% auto was utilized in this EIR. Based on modal split data in an environmental review of the proposed Rincon Point South Beach Redevelopment Plan,[1] the proposed project's residential trips would be about 55% auto (with an occupancy of 1.2) and 40% transit. A survey[2] of downtown retail uses indicates about 15% of the retail customer trips would be via auto with the remaining trips evenly split between Muni and walking.

Applying these percentages to the trip generation outlined in Table 5 yields a total of about 165 auto trips, 175 transit trips and 45 trips by other (pedestrian/bicycle) modes. The analysis assumed the highest trip total within a range -- this assumption results in a total trip total of 385, 25 more than calculated on Table 5, page 62.

Based upon these modal split estimates, the apportionment of project trip generation has been calculated and compared to the cumulative trip generation of other development. The various trip totals are outlined in Table 6, page 64.

2. Impacts on the Street System

Traffic volumes in the vicinity of the project site are given in Table 7, page 65. In general, stable traffic flow conditions (Service Level 'C' or better, as defined in Appendix B page A-30) can be maintained on 2-lane streets carrying 10,000-12,000 daily vehicles and 4-lane streets carrying 20,000-25,000 daily vehicles.[3] Within these criteria, the streets listed in Table 7, page 65 are experiencing stable traffic flow.

A more specific analysis of traffic flow quality examines the peak traffic flow at signalized intersections. Peak-hour turning movement counts have been obtained for 4 intersections near the project site: Bryant/Third, Bryant/Fourth, Brannan/Third and

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[1] San Francisco Redevelopment Agency, EIR Rincon Project-South Beach Redevelopment Plan, San Francisco, certified by Redevelopment Agency, 5 November 1980 (no EE #),p. 69.

[2] Survey conducted by EIP Corporation on April 3, 1982 on file at the office of Environmental Review, 45 Hyde Street.

[3] Institute of Transportation Engineers, Transportation and Traffic Engineering Handbook, New Jersey, Prentice-Hall, 1976, pages 337-338.

TABLE 6

PROJECT AND CUMULATIVE PERSON-TRIP GENERATION DURING PEAK HOURS

Mode and Distribution	Project	Other Development	Total
Auto	165*	22,300	22,465
Muni	110	17,900	18,010
BART	15	9,400	9,415
AC	15	5,200	5,215
SamTrans	-	900	900
SPRR	20	2,700	2,720
GGT	15	2,900	2,915
Ferry	-	900	900
Other	45	1,700	1,745
TOTALS	385*	63,900**	64,285

* Auto trips would reflect an average occupancy of 1.4.

** Exceeds the estimate of 62,000 trips due to the inclusion of intermodal transfers

Source: EIP Corporation.

TABLE 7

EXISTING TRAFFIC VOLUMES[1]

Street and Location	Daily Volume	Number of Lanes	Date of Count
Harrison St. (west of 4th)	10,800	5 Lanes	1981
Third St. (north of Bryant)	21,300	5 Lanes	1980
Third St. (north of Harrison)	17,900	5 Lanes	1981
Fourth St. (north of Brannan)	7,900	4 Lanes	1981
Bryant St. (west of 5th)	15,700	5 Lanes	1979
Brannan St. (west of 5th)	8,700	(2 Lanes) (eastbound)	1979

[1]Obtained from traffic count records of the Traffic Engineering Division, San Francisco Department of Public Works.

TABLE 8

SERVICE LEVELS

Intersection	Peak Hour	Service Level
Bryant/Third	7:30-8:30 a.m.	B
Bryant/Fourth	7:30-8:30 a.m.	A
Brannan/Third	4:30-5:30 p.m.	B
Brannan/Fourth	4:30-5:30 p.m.	A

Brannan/Fourth. Using a "critical movement analysis"[1] the service levels of the intersection have been calculated in Table 8, page 65. While these service levels indicate stable traffic flow conditions, the downtown freeway network is the actual constraint on vehicle access to/from the project area. The I-80 freeway operates at jammed conditions (Service Levels E-F) during the evening peak hour.[2] Thus, the overall congestion on the freeway can affect the flow on specific freeway links or individual ramps. (For example, Berry Street operates at service level E-F during the morning peak hours and Brannan Street near the I-80 on-ramp operates at E-F during the p.m. peak hour.)

In establishing the base traffic conditions without the project, it is recognized that traffic increases would result from other downtown development under construction, approved or under formal review. About 16,000 new p.m. peak auto trips are projected as a result of this development (see Table 6, page 64). (This projection represents a worst-case assumption with no change in auto occupancy and no change in mode splits). No statistics are available for comparing this increase to the existing downtown peak hour traffic. Based upon comparisons available for other modes[3], however, it is estimated that the total peak hour auto travel in the downtown area could increase by approximately 55%. If the 55%-increase and the 0.6%-increase generated by the proposed project are applied to the peak hour volumes obtained for the Bryant/Third, Bryant/Fourth, Brannan/Third and Brannan Fourth intersections, the service levels shown in Table 9 would result (page 67).

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[1] "Critical Movement Analysis" described in Circular No. 212, Transportation Research Board, January 1980.

[2] Leonard Newman, Chief, Highway Operations Branch, CalTrans, telephone conversation, 7 August 1981.

[3] San Francisco Department of City Planning, Guidelines for Environmental Evaluation-Transportation Impacts, June 1980 (revised October 1980).

TABLE 9

PROJECTED SERVICE LEVELS

	Existing Service Level	Projected Service Level in 1985[1] Without Project	With Project
Bryant/Third	B	F	F
Bryant/Fourth	A	C	C
Brannan/Third	B	F	F
Brannan/Fourth	A[2]	D[2]	D[2]

The freeways and freeway ramps would be the critical links in the overall network. With these facilities currently operating under congested conditions during peak hours, the traffic increases generated by cumulative downtown development would add to this congestion with the likely result that travel delays would be extended.

The increased traffic due to cumulative development would probably affect the industrial activities in the project area. On streets near the project site, increased traffic would result from travel to/from freeway ramp locations. Because many of the individual uses depend upon the streets for loading and deliveries, vehicle conflicts would increase. Truck delivery and loading would be disruptive to through-traffic flow. Increases in through-traffic would make truck maneuvering (such as backing up to loading docks) more difficult.

Cumulative development would also lead to increased pedestrian travel in the downtown area. As pedestrian travel increases, pedestrian volumes could exceed the capacity of sidewalks and crosswalks. This problem would be particularly evident in the project area since sidewalk and crosswalk widths are relatively narrow (see Figure 28, page 68).

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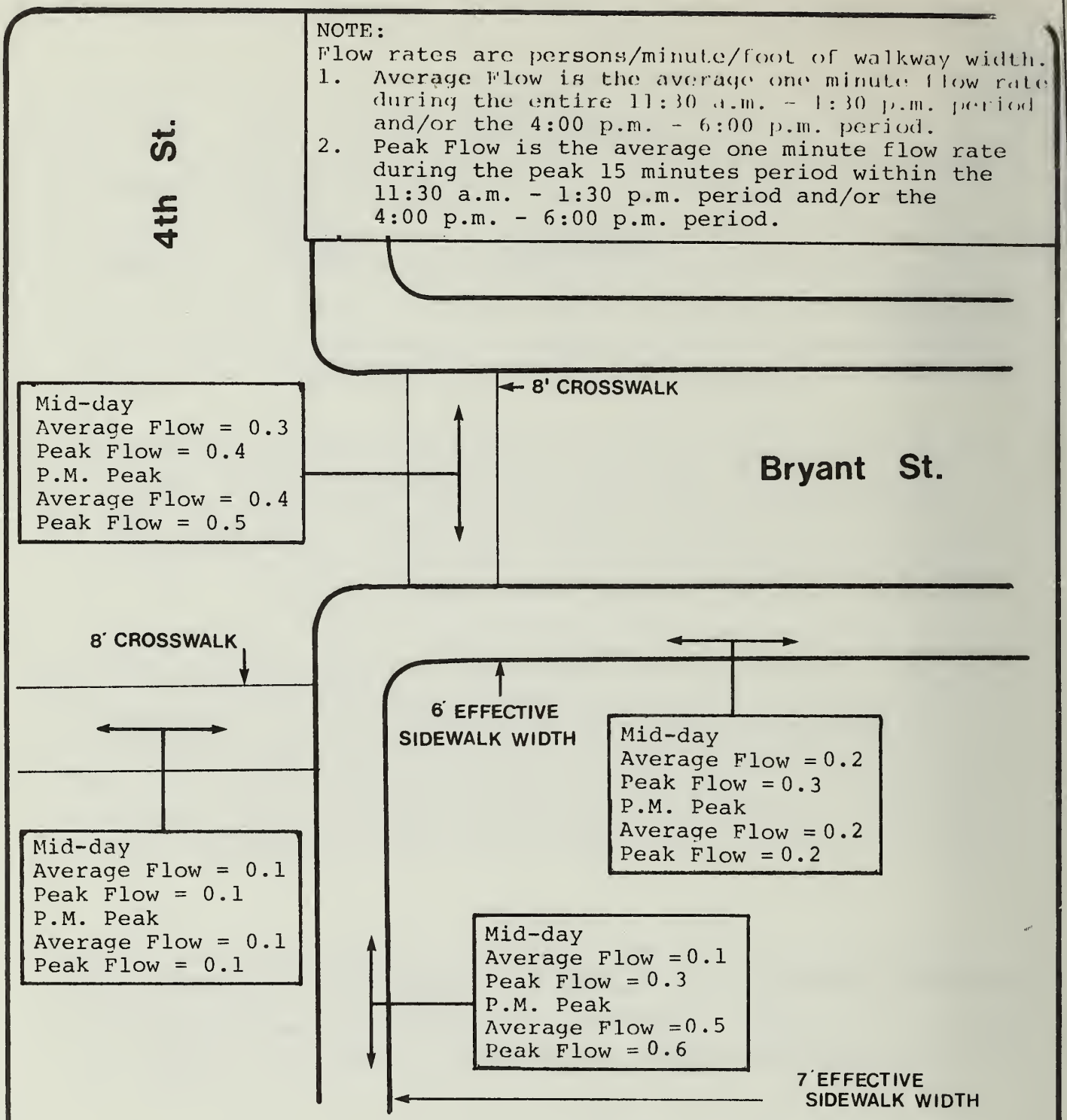
[1] Projections assume that cumulative development under construction, approved or under formal review would be completed and occupied by 1985. It is recognized that some of these projects (particularly those under formal review) may not be completed by 1985.

[2] During brief periods of the peak hour the I-280 on-ramp at Brannan/Sixth is congested to the extent that vehicle backups on Brannan extend through Fifth Street to Fourth Street. In these instances the operation of Brannan/Fourth approaches jammed (service level E-F) conditions.



Effective sidewalk width is the actual width available to pedestrians and reflects the fact that a portion of the sidewalk is devoted to street trees, signs, etc

Projected Pedestrian Conditions

North

Not to Scale

Source: EIP Corp.

Figure No. 28

The internal streets (Welsh, Zoe and Freelon Streets) fronting the project site are all narrow facilities serving adjacent development. As shown on Figure 15a, page 31, all three streets are 21 feet wide (curb to curb) with 7-foot wide sidwalks on each side. Parking is allowed on the north side of Welsh, the east side of Zoe and both sides of Freelon. Because curb parking would block the narrow streets, cars park on the sidewalk areas. The existing volume of the project would add about 105 p.m. peak-hour vehicle trips to Freelon Street. The existing volume on Freelon Street is 30-35 vehicles during the peak hour and project traffic would therefore represent a 300% increase. Freelon Street cannot accommodate sidewalks, vehicle parking and 2-way traffic flow. If 2-way flow cannot be maintained between 4th and the project driveway, the added traffic volume would probably result in vehicle queues which could back up into 4th Street. These queues could briefly disrupt through traffic flow on 4th, but would not be expected to measurably affect the service level at 4th/Bryant.

It is rather tenuous to predict the probable project traffic on Zoe and Welsh Streets (truck traffic on Welsh is discussed under parking impacts). The existing volumes on Zoe and Welsh are estimated to be 10-15 vehicles during the p.m. peak hour. Welsh would probably not be an access route since it would not be as direct as the Freelon Street garage access from 4th Street. Zoe Street could provide more direct access, particularly via Brannan Street. If 10% of the project's traffic uses Zoe, the existing volume would probably double. Although two-way traffic can be accommodated on Zoe, project access would ultimately occur on Freelon and that street is congested by parking on both sides (encroaching onto sidewalks).

There would be no need for a change in configuration of existing public roads or facilities. No new public roads would be constructed.

3. Transit Impacts

San Francisco Municipal Railway. MUNI operates 11 routes within walking distance (2,000 feet) of the project site (Table 10, page 70).

The City has provided patronage statistics for all downtown routes.[1] The projections in this EIR include existing patronage as well as projected patronage attributed to other committed development in the downtown area. In Table 11, page 72, the p.m. peak hour

[1] San Francisco Department of City Planning, Guidelines for Environmental Evaluation - Transportation Impacts, June 1980 (revised October 1980).

TABLE 10

SUMMARY OF MUNI ROUTES WITHIN
2000 FEET OF SITE

ROUTE DESIGNATION	
15 - Third	Links Fisherman's Wharf, Downtown, Bayview and City College
17x - Park Merced Express	Freeway express service to Downtown from Park Merced area
25 - San Bruno	Links South of Market with Nob Hill, Tenderloin and Cow Palace
27 - Noe	Links Downtown with Mission and upper Noe Valley
30 - Stockton	Links Downtown with S.P. Depot, North Beach and Marina area
30x - Freeway Express	Freeway express service linking Downtown with McLaren Park area
32 - Embarcadero	Links Downtown and South of Market with Aquatic Park, day time only
41 - Union	Links Downtown with Western Addition
42 - Downtown Loop	Links Downtown with S.P. Depot, Civic Center and Fisherman's Wharf
80x - Gateway Express	Links Golden Gateway Center with Downtown and S.P. Depot
81x - Caltrans Express	Links South of Market with S.P.Depot

patronage capacity and load factors are shown for the lines within 2,000 feet of the proposed project. A number of lines will operate over capacity in 1983. Because capacity is based upon 150% of the available seats, any load factor over 1.00 reflects extremely crowded conditions.

MUNI load factors will be further increased by downtown projects which have been approved since City patronage projections were prepared.

The additional peak hour patronage due to the proposed project was added to the existing patronage on a proportional line-by-line basis. As indicated in Table 11, page 72, the project would increase the 1983 load factors by not more than 0.2%. However, passengers on the 7 lines with load factors approaching or exceeding 1.00 would experience extreme crowding.

"Muni plans[1] project a 10-15% increase in the system capacity by 1986. This increase would reflect added capacity in the MUNI Metro light-rail service, and the replacement of existing buses with articulated coaches. This capacity increase would relieve the projected load factors; specific benefits, however, would depend upon a more detailed improvement program with capacity increases cited for each route. Even with a 10-15% capacity increase, 7 of the 11 lines listed on Table 11 would have load factors exceeding 1.00.

BART. BART staff[2] have provided the following p.m. peak hour operating statistics for outbound trains at their peak load points (during October-December 1981).

	East Bay	Daly City
Seats	9,914	6,523
Passengers	14,372	6,558
Average load factor	1.45	1.01

[1] San Francisco Muncipal Railway 1981-86 Muni 5-Year Plan 15 May 1981, pages 2,249-2-252.

[2] John Stamas, BART Planning Staff, personal communication, 6 April 1982.

TABLE II

PROJECTED 1983 MUNI PATRONAGE[1]
P.M. PEAK HOUR - OUTBOUND DIRECTION

(Includes existing patronage plus projected ridership from downtown development approved under construction or proposed

	1983 PATRONAGE			LOAD FACTORS	
LINE	WITHOUT PROJECT[1]	WITH PROJECT	CAPACITY[1,2]	WITHOUT PROJECT	WITH PROJECT
15	1,375	1,395	975	1.41	1.43
17x	405	410	375	1.08	1.09
25	765	775	600	1.28	1.29
27	245	250	300	0.82	0.83
30	1,655	1,680	1,425	1.16	1.18
30x	1,275	1,295	975	1.31	1.33
32	645	655	1,050	0.61	0.62
41	140	140	325	0.43	0.43
42	355	360	300	1.18	1.20
80x	670	680	600	1.12	1.13
81x	155	155	450	0.34	0.34

[1] San Francisco Department of City Planning, Guidelines for Environmental Evaluation - Transportation Impacts, June 1980 (revised October 1980).

[2] Capacity = 150% of available seats.

[3] Load Factor = Ratio of patronage to capacity.

With heavier ridership during portions of the peak hour, certain peak trains experience load factors which are approximately 10% higher.

Cumulative downtown development would increase BART ridership (the proposed project would add 0.6% to this increase). The East Bay trains would experience average peak hour load factors of 2.0-2.1 and higher factors on certain peak trains. BART's short-term (5-year) improvement program calls for an approximate 20%-increase in capacity (with added cars and some decrease in headways).[1] These improvements would allow the peak hour load factors to average 1.5-1.6 - BART District policy calls for a maximum load factor averaging 1.3 for all trains during the peak hour.[2]

AC Transit. AC Transit operates approximately 200 buses outbound from the Transbay Terminal during the p.m. peak hour.[3] Based on a capacity of 125% of available seating (AC policy accepts 25% standees) and an average of 50 seats per bus, a capacity of 12,500 passengers is available. With a current peak hour patronage of 9,000 during this peak hour, the overall capacity reserve is 3,500. Within the peak hour certain of the peak runs have higher load factors and therefore no excess capacity.

The proposed project and cumulative development would generate about 5,200 trips, exceeding most of the 3500 person capacity/reserve. AC Transit staff indicate that the capacity will be increased approximately 10% over the next 3-4 years and this increase will raise the capacity reserve.[3]

Golden Gate Transit.[4] Golden Gate Transit operates 147 buses out of the downtown area during the afternoon peak hour, about 120 buses on Financial District routes and 27 buses

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[1] Bill Kritikos, BART Planning Staff, telephone conversation, 8 April 1982.

[2] John Stamas, BART Planning Staff, personal communication, 6 April 1982.

[3] Gene Gardner, AC Planning Staff, telephone conversation, 27 March 1981.

[4] Alan Zahradnik, Golden Gate Transit Planning Staff, telephone conversation, 27 March 1981.

at their design capacity level as set by Golden Gate Transit policy (i.e. at seating capacity). Golden Gate Transit allows a maximum (crush) capacity of 55 passengers per bus, corresponding to 10 standees which equates to 8,085 peak hour riders. Current peak hour ridership out of downtown is estimated at 6,620 passengers. On certain peak runs, more than 10 standees may be present.

With a design capacity of 8,085 peak-hour passengers the effect of cumulative downtown development (with the proposed project) would raise patronage to 99% of this figure. Because of financial limitations, the District would probably not be able to increase its capacity[1] to accommodate the increased demand.

Sam Trans.[2] There are currently 12 SamTrans buses leaving the downtown area during the afternoon peak hour. They operate at about 90% of seating capacity, corresponding to peak-hour ridership of about 510 passengers. Assuming a maximum capacity of 125% of available seats, it is estimated that there is a reserve capacity for 240 passengers. The patronage from cumulative development would exceed the available 240- passenger reserve capacity of SamTrans. No specific capacity improvements have been cited by the District.

Southern Pacific.[3] The SP commute service has since 1980 been incorporated into an operating agreement between the railroad and the State of California (through CalTrans). Current service provides 11 southbound trains with 9,000 seats during the p.m. peak hour. The current load factor (based upon 1 seat per passenger) is 0.83, or approximately 7,470.

Southern Pacific service will be improved through the addition (within 3-5 years) of approximately 1,200 seats to the southbound peak hour capacity. With the system's existing reserve capacity of about 1,530 seats, the total capacity reserve would be about 2,730 seats. Thus, the addition of 2,700 new peak hour passengers (due to cumulative downtown development) could be accommodated.

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[1] Based on information contained in the Draft Environmental Impact Report for Proposed Pacific Gateway Office Building Project (EE 78.61); also telephone conversation with Peter Dyson, Golden Gate Transit, 17 July 1980.

[2] Larry Stueck, SamTrans staff, telephone conversation, 27 March 1981.

[3] Carl Smith, CalTrans, telephone conversation, 27 April 1981.

4. Parking Impacts

Based upon the San Francisco Planning Code, the proposed project's parking requirements have been calculated as follows:

- 160 dwelling units @ 1 space/unit	=	160 spaces
- 55,600 sq. ft. wholesale/service @/space/1,000 sq. ft.	=	56 spaces
- 19,200 sq. ft. light industrial @/1 space/1,500 sq. ft.	=	13 spaces
- 12,000 sq. ft. retail @ 2 spaces/1,000 sq. ft.	=	24 spaces
Total	=	253 spaces

The proposed project's 265 space parking garage would meet this requirement. The sponsor would allocate preferential parking for carpools and vanpools.

The project parking demand has also been calculated on the basis of the estimated trip generation (Table 5 page 62). The demand would be:

- 575 daily industrial/wholesale trips x 57[1]% work x 60% auto/1.5 persons per car/2 trips daily = 66 spaces
- 575 daily industrial/wholesale trips x 43% non-work x 60% auto/1.5/2/ turnovers daily[2] = 6 spaces
- 1,200 daily retail trips x 10% work[1] x 60% auto/1.5/2=24 spaces
- 1,200 daily retail trips x 90% non-work x 15%/1.5/2[3] turnovers[2] = 7 spaces
- 160 residential units x 1 space = 160 spaces

Total = 263 spaces.

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[1] Source: S.F. DCP, Guidelines for Environmental Evaluation-Transportation Impacts, June 1980 (revised October 1980)

[2] It is assumed that non-work trips would primarily be customer trips. These trips would tend to be spaced throughout the 8-10 hour work day - a turnover of 8 was assumed on the basis of an 8-10 hour work day and a customer visit of 1 - 1½ hours.

[3] Institute of Transportation Engineers, Trip Generation 1979 (not paginated).

The proposed project would displace 9 parking spaces in an existing surface lot at the northeast corner of the project site; however, these spaces would be accommodated in the project. In addition, the cumulative downtown development projected for the next 3 years would add to the parking demand in the downtown area. It is probable that there would be an increased parking demand (due to cumulative development) in the project area. Added vehicle circulation would also result from the increased number of vehicles seeking the limited number parking spaces, increasing street congestion.

The proposed project's access driveway would eliminate 1-2 curb spaces (30-35 feet) on Freelon and the truck docks would eliminate 2-3 spaces (55-60 feet) on Welsh. The demand for these 3-5 spaces would be shifted to other curb or off-street parking in the project area. Within the area surveyed as a part of this EIR (page 33 Parking Setting), about 600 off-street spaces are available and it is probable that displaced demand would shift to these facilities. The added circulation would conflict with truck delivery and loading functions which typically occur on the streets in the project area. In addition, an increased parking demand would result in fewer available on-street and off-street spaces for employees of and visitors to the adjacent industrial uses.

Immediately adjacent to the site (on Welsh, Zoe and Freelon Streets) industrial uses rely upon the streets for loading functions. The project would add vehicle traffic to these streets and this added circulation would conflict with the normal truck activity.

The proposed project would provide 3 truck loading spaces on Welsh Street. The Planning Commission has recently adopted guidelines which call for 3 loading spaces. Based upon a City study,[1] the peak hour demand would be 25% higher, a demand for 3-4 spaces. During these periods, delivery vehicles would probably double park, disrupting through traffic flows. Access in/out of the proposed truck docks would be restricted by the narrow width of Welsh Street and the presence of curb parking along the north side of Welsh Street. As shown on Figure 28a, page 78, the truck docks would accommodate trucks with a maximum overall length of 35 feet. Trucks in excess of this length would be unable to maneuver (or would have significant difficulty manuevering) in/out of the truck docks.

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[1] Wilbur Smith and Associates, Center City Pedestrian Circulation and Goods Movement Study, September 1980, page 73.

The project sponsor has proposed the following parking management plan:

Homeowners Association and Building Owner to manage parking by monthly lease of spaces according to the following priority:

1. Condominium Owners
2. Other building tenants
3. Business and individuals outside the project.
4. Parking will not be open to the general public

Access to parking is to be controlled by card. Condominium security guard will be able to visually monitor the parking gate and parking levels as well.

Visitors would be able to use certain spaces designated for commercial users during evening and weekend hours.

Lease rates will be set to encourage parking occupancy of 95% or greater.

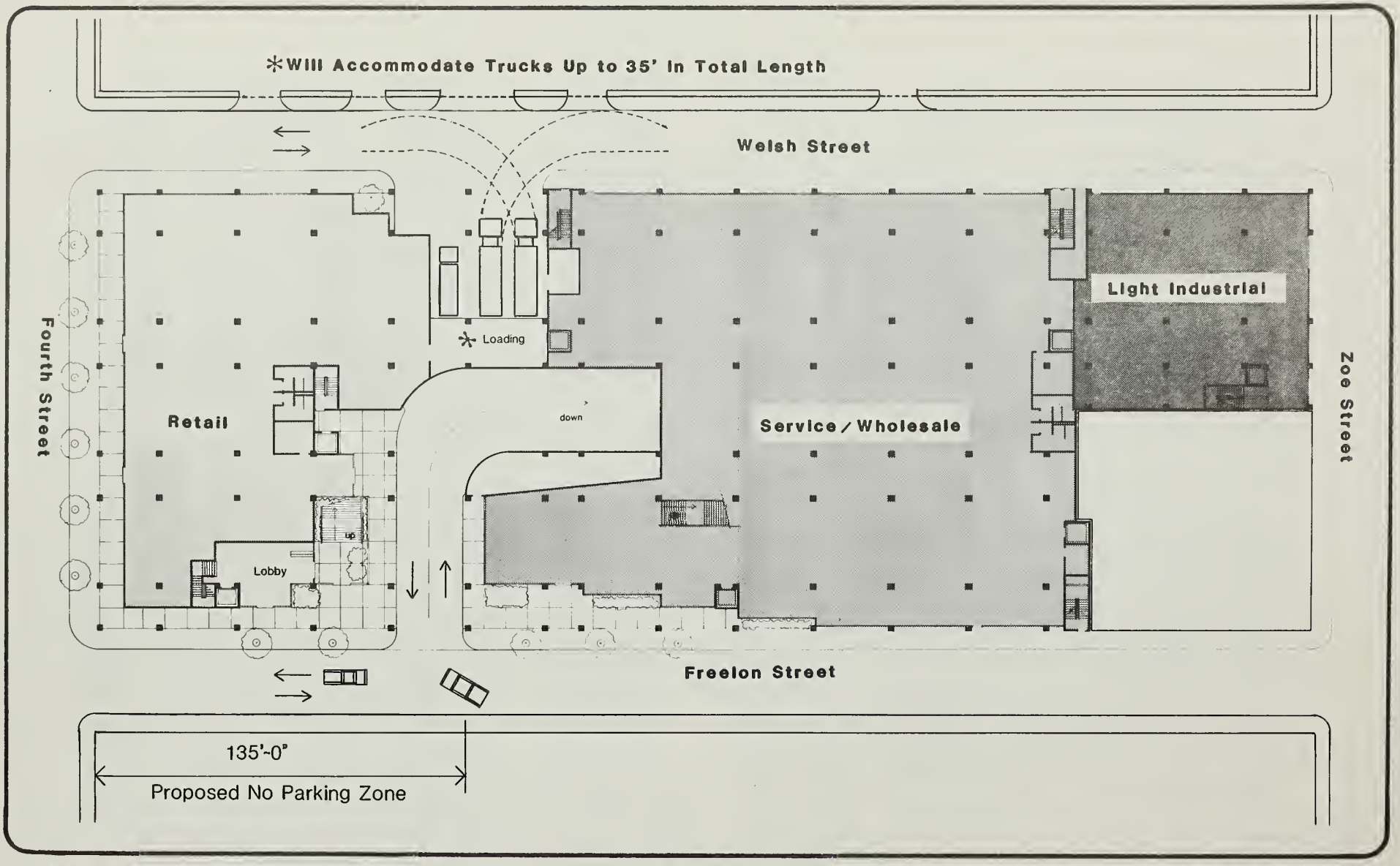
5. Pedestrian Impacts

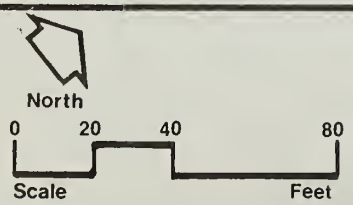
Pedestrian volumes on adjacent sidewalks and crosswalks were counted during the midday (11:30 a.m. - 1:30 p.m.) and evening (4:00 p.m. - 6:00 p.m.) peak periods. The physical conditions, average flows during these periods, and peak 15-minute flow rates are shown in Figure 18, page 35.

An accepted methodology for describing pedestrian flow quality is contained in Urban Space for Pedestrians by Pushkarev and Zupan.[1] They cite the following characteristics of pedestrian flow, as shown in Table 12, page 79.

During the peak 15-minute periods, all the sidewalks or crosswalks bounding the project now experience open flow. The cited reference also suggests that the "platooning" effect (groups of pedestrians) on pedestrian flows can cause more congested conditions during certain peak periods and that a rate of 4 persons/minute should be added to simulate this platooning. With this adjustment flows remain unimpeded.

[1] Pushkarev and Zupan, Urban Space for Pedestrians, MIT Press 1975. Recommended methodology in OER Transportation Guidelines.





Proposed Loading Route-Ground Level

Figure No. 28a

Source: Tai Associates Architects

TABLE 12

PEDESTRIAN FLOW CHARACTERISTICS

Description		Flow Rate (persons/minute/foot of walkway width)
Open	less than	0.5
Unimpeded		0.5 - 2.0
Impeded		2.0 - 6.0
Constrained		6.0 - 10.0
Crowded		10.0 - 14.0
Congested		14.0 +

About 40% (1,100) of the proposed project's daily trips would be transit/pedestrian oriented and these pedestrian trips have been added to the existing pedestrian volumes on sidewalks and crosswalks adjacent to the project site. Based on travel research conducted by the California Department of Transportation,[1] it is estimated that approximately 20% of the daily trips would occur in the 4:00 -6:00 p.m. period and 15% in the 11:30 a.m.-1:30 p.m. period. Thus, approximately 165 mid-day pedestrian trips and 220 p.m. peak period trips have been added to the existing pedestrian flows; the total projected flows are depicted in Figure 28, page 68. Based upon these projections, the quality of pedestrian flow would remain unchanged from the existing characteristics.

It is recognized that the present curb parking characteristics would impact pedestrian access for the project. Currently cars park on the sidewalks along Freelon, Welsh and Zoe Streets. This parking effectively precludes pedestrian access on most of the alley sidewalks adjacent to the project site. Pedestrians would be forced to walk in the street area, conflicting with traffic flow. (Enforcement of parking regulations would result in sidewalks being available to pedestrians).

[1] CalTrans, Tenth Progress Report on Trip Ends Generation, San Francisco, July 1975.

E. NOISE

Construction of the Welsh Commons project would take place over approximately 14 months and would encompass 3 phases: foundation excavation, foundation construction, and building erection. Due to the preliminary nature of project plans, it is not known what construction techniques or equipment would be used. To estimate possible construction noise impacts, this analysis assumes typical equipment and construction techniques.

During excavation, bulldozers, graders, haul trucks and front-end loaders would be expected on the project site. These pieces of equipment generate from 70-85 dBA at 50 feet. During foundation construction, the major noise source would be pile drivers, which would emit noise levels of approximately 105 dBA at 50 feet for a period of up to 1 month. After pile driving, concrete pumpers, power saws, cranes, air compressors, engine generators, and impact torque wrenches would be the major noise sources. These pieces of equipment emit from 70-95 dBA at 50 feet. The impact wrenches emit the highest noise levels (95 dBA at 50 feet) and would probably be used sporadically for 1 to 2 months.

During pile driving, noise levels outside the buildings closest to the project site would range from 86 dBA to 100 dBA. Inside the buildings, noise levels would range from 66 dBA to 80 dBA. At a level of 66 dBA, noise levels would be annoying and distracting to office workers, would interfere with conversation, but probably would not interfere with telephone use. At a level of 80 dBA, workers would find it difficult to concentrate, conversation would be impossible, telephone conversations would be difficult, and worker dissatisfaction could be expected. The same interior noise levels could be expected in the nearest residences located in the vicinity of Fourth and Freelon Streets across from the project. However, because of the different expectations of residents, noise impacts could be expected to be more severe. For example, during pile driving, it would be impossible to watch television or listen to a stereo at normal levels.

During use of impact wrenches, noise levels inside adjacent buildings would range from 56 dBA to 70 dBA. Because impact wrenches are used sporadically, noise associated with their use is not as severe as for pile driving at the same level. At a level of 56 dBA inside adjacent buildings, including residences, no interference would be expected, and, at most, there could be some annoyance to residents and workers. At 70 dBA, conversations would be interrupted but telephone use would not be interfered with.

During the remaining construction period, noise levels inside adjacent buildings would be below 60 dBA. At this level, no interference with activities would be expected.

Construction noise in the City and County of San Francisco is controlled by Ordinance 274-72, Regulation of Noise, Section 2907. The Ordinance requires that all powered construction equipment except impact tools and equipment emit not more than 80 dBA measured at 100 feet (86 dBA when measured at 50 feet). Impact tools and equipment including pavement breakers, jackhammers, and pile drivers must have both intake and exhaust muffled to the satisfaction of the Director of Public Works. The Ordinance further requires a special permit for construction after 8:00 p.m. and before 7:00 a.m.

F. AIR QUALITY AND CLIMATE

1. Local

Primary local impacts are due to elevated carbon monoxide concentrations on congested streets. The traffic analysis for this project indicates that traffic volumes at the most congested intersections in the area, Third/Brannan and Third/Bryant, are predicted to increase by approximately 30% by 1983 over current conditions due to cumulative development in the area. The addition of the proposed project adds approximately 1% to this total.

Table 13, page 82, shows the results of the application of a line source air quality model[1] which predicts curbside carbon monoxide concentrations. The predictions show no current or future violations of the 1-hour average carbon monoxide standard of 35 part per million (ppm), although concentrations are predicted to be higher in 1983 due to projected increases in traffic volumes. Concentrations predicted for 1983 do not differ between the with project and without project alternatives.

The results indicate that violations of the 8-hour average standards of 9 ppm are expected to occur under current worst-case conditions at both intersections. These violations are expected to remain in 1983. The 1-hour average standard is predicted to be approached but not exceeded in 1983 at 3rd and Bryant. As is the case for the 1-hour standard, there is no difference between the with-project and without-project alternatives. According to

[1] BAAQMD, "Guidelines for Air Quality Impact Analysis for 1981 emissions factors."

TABLE 13

PROJECTED CARBON MONOXIDE CONCENTRATIONS AT CRITICAL LOCATIONS (PPM)[1]

	1981		1983 Without Project		1983 With Project		CO Standard	
	1 Hr.	8 Hr.	1 Hr.	8 Hr.	1 Hr.	8 Hr.	1 Hr.	8 Hr.
3rd & Bryant	33	10	35	10	35	10	35	9
3rd & Brannan	27	9	28	9	28	9		

Includes background concentrations[2] as follows:

	1 Hr.	8 Hr.
1981	13.4	7.8
1983	12.4	7.3

[1] These figures are based upon second highest concentrations measured by the Bay Area Air Quality Management District (BAAQMD) from 1978-1980: 14.4 ppm 1-hr, 8.3 ppm 8-hr) and adjusted in proportion to expected reductions in CO emissions. Data was supplied by Thomas Parardi, Chief of Research and Planning, BAAQMD, telephone conversation, 11 September 1981.

[2] Background concentrations refer to the contribution of sources in the surrounding area to pollutant levels at the intersection being studied.

the results presented in Table 13, the 55% increase in traffic volumes due to cumulative development in the area is expected to maintain elevated carbon monoxide levels despite decreases in vehicular emissions rates. Measures that would reduce traffic volumes and congestion such as carpooling, vanpooling and staggered work hours would also reduce air pollution.

2. Regional

Regional impacts of the proposed project are due largely to increases in vehicular traffic and, to a lesser extent, to on-site combustion of natural gas. Table 14, page 84, presents total project-generated emissions for 1983. Project-generated emissions are consistently less than .010% of regional total emissions. Thus, the project would increase air pollutants but not enough to result in a measurable increase in regional pollutant concentrations. Emissions due to cumulative development are far greater than the project generated emissions, these emissions would result in a reduction in regional air quality compared to a no-growth alternative. The Bay Area Air Quality Plan indicates that ozone is expected to be a problem in the future and suggests that pollution control strategies be used to achieve compliance with standards. The project would not conflict with these control strategies, but since it is expected to result in increases in pollutant emissions it would be detrimental to the objectives of the plan.

3. Construction

Demolition, earthmoving and construction activities are likely to increase particulate concentrations in adjacent areas. Additionally, emissions from motorized equipment on the site would include carbon monoxide, oxides of nitrogen and hydrocarbons and would therefore be a temporary contributor to local pollutant concentrations. Data upon which to base accurate estimates of the quantities of particulates which would be emitted are limited, however a typical level for heavy construction is 1.2 tons per acre per month[1] which would result in a total monthly emissions of 1.7 tons.

Estimates of emissions from motorized construction equipment are unavailable due to the diversity of the kind and quantity of such operations, and the variability in emission factors from various construction equipment.

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[1] U.S. Environmental Protection Agency Supplement No.5 for complication of Air Pollutant Emission factors, Second Edition, Office of Air Quality Planning and Standards, North Carolina December 1975 p. 11. 2. 4-1.

TABLE 14

TOTAL PROJECT-GENERATED EMISSIONS IN TONS/DAY[1]

	Vehicles	Natural[2] Gas Combustion	Total	%[3] Regional Total
Carbon Monoxide	.231	9.2×10^{-5}	.231	.0092
Hydrocarbons	.020	3.68×10^{-5}	.020	.0034
Nitrogen Oxides	.023	$.46 \times 10^{-5}$	.023	.0039
Sulfur Oxides	.002	$.276 \times 10^{-5}$	.002	.0009
Particulates	.003	4.6×10^{-5}	.003	.0006

[1] Although the methods of estimation used here are not ordinarily considered accurate to 3 figures, they are carried out to demonstrate the relative magnitudes of the combustion-generated emissions.

[2] U.S. Environmental Protection Agency, Compilation of Emission Factors, 2nd edition, AP-42, Research Triangle Park, North Carolina, February 1976.

[3] BAAQMD, Air Currents, Vol. 24,. No. 8, August 1981.

4. Shadows

Figures 29, 30, and 31, pages 86, 87, and 88 indicate shadow patterns the proposed structure would project during various portions of the year. The analysis is for periods when the sun would be lowest in the sky (December 21), through the period in which the sun would be highest in the sky (June 21). The times of analysis are 9 a.m., 1 p.m., and 4 p.m. wherein the proposed building would cast maximum and minimum shadows on sidewalks, streets and other structures. Generally, building shadows reduce available light in open areas and interior building spaces, and can create uncomfortable conditions in outdoor pedestrian areas on cool, windy days. Building shadows can also reduce heat levels in shadowed areas on hot, sunny days.

At 9 a.m. during spring, summer, winter and fall, the project would cast shadows over Welsh Street and structures facing Welsh Street west of the project site; shadows cast on existing structures would be least pronounced on June 21st, during the summer. At 1 p.m., the project would cast shadows on portions of Zoe and Welsh Streets adjacent to the project site during each of the four seasons. Project shadows would be cast on portions of buildings fronting Zoe and Welsh Streets opposite the project site during the winter at 1 p.m., but not during spring, summer or fall at 1 p.m.

At 4 p.m. during the four seasons, project shadows would be cast on Freelon and Zoe Streets. Shadows would be cast on buildings fronting Zoe Street, opposite the project site during spring, fall and winter, but not in summer. The only time shadows would be cast on Fourth Street would be during the summer at 9 a.m. The project would not cast shadows on structures fronting Fourth Street opposite the project site.

G. ENERGY

1. Construction

Assuming a construction cost of $30 million and an energy use to construction cost ratio of 4,000 BTU/dollar,[1] the estimated energy use during construction would be 120 billion

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[1] Source: Tetra Technology, Inc., Energy Use in the Contract Construction Industry, Appendix A; Arlington, Virgina, 1975, page 3. One BTU is the quantity of heat required to heat 1 pound of water 1 degree Fahrenheit at 39 degrees F.

March/September 9a.m.

March/September 1p.m.

March/September 4 p.m.

North

0 100 200 400

Scale Feet

Shadow Diagrams

Figure No. 29

☐ Existing Shadows

▨ Shadows created by Proposed Project

North

0 100 200 400

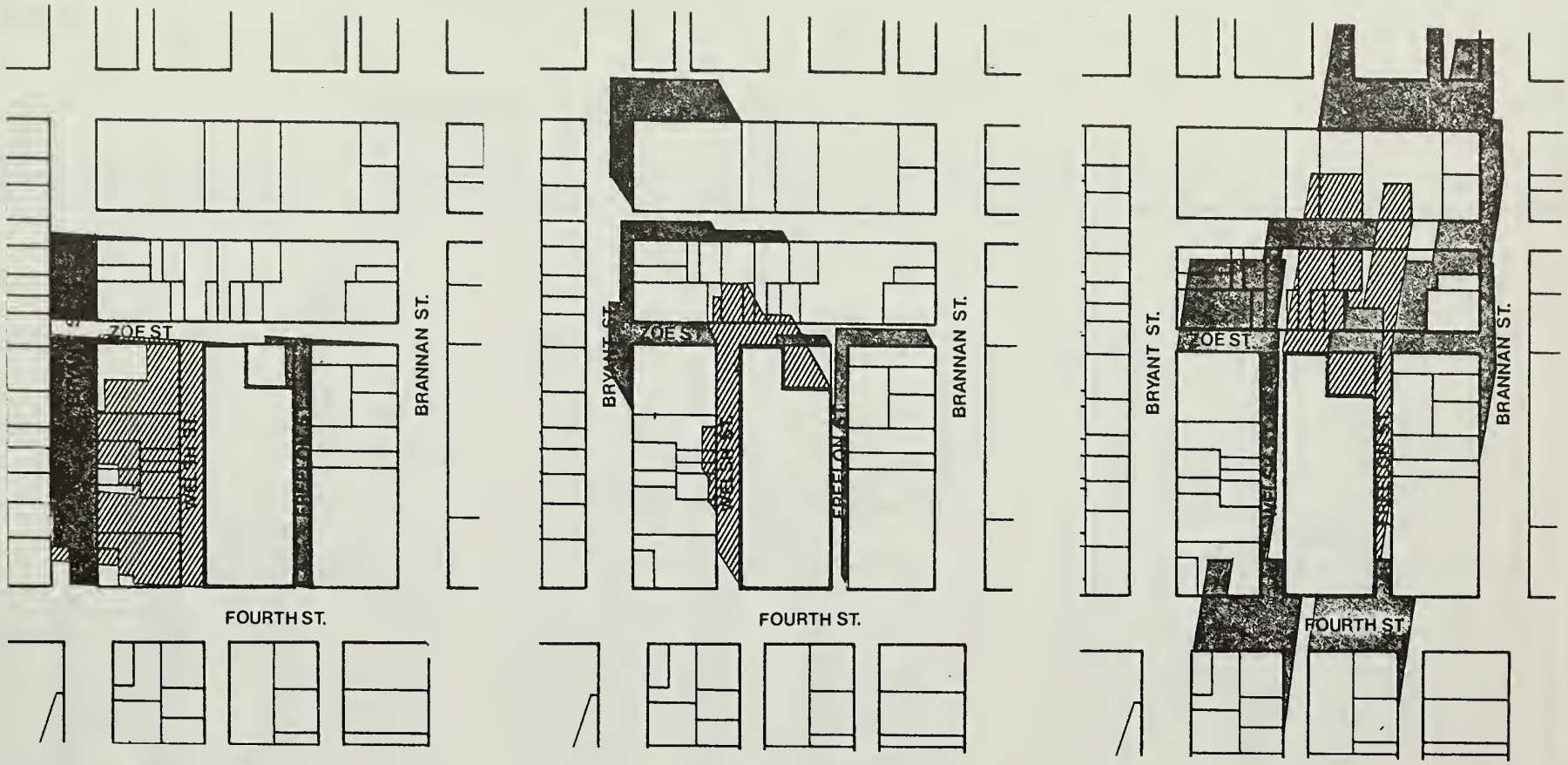
Scale Feet

Shadow Diagrams

☐ Existing Shadows

▨ Shadows created by Proposed Project

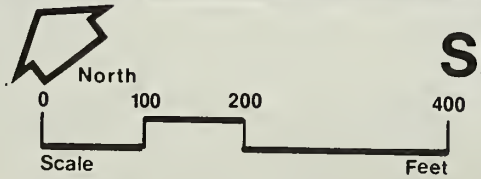
Figure No. 30



December 9 a.m.

December 1 p.m.

December 4 p.m.



Shadow Diagrams

Figure No. 31

☐ Existing Shadows
▨ Shadows created by Proposed Project

BTU in the form of gasoline, diesel fuel, electricity, and lubricants.[1] This is the equivalent of 11,000 barrels of oil.[2]

2. Operation[3]

Electricity. The project would have a connected load of 1,000 kw. Annual consumption would total 1.7 million kilowatt-hours (kwh) (equivalent to 17 billion BTU); monthly consumption would average 140,000 kwh (equivalent to 1.4 billion BTU). Average monthly consumption would, then, be about 0.53 kwh per square foot of floor space. Daily and annual load distribution curves are shown in Figure 32, page 90.

Natural Gas. Annual gas use would total 16 billion BTU; average monthly gas use would be 1.3 billion BTU. This is the equivalent of 167 BTU per square foot per day. Distribution curves for natural gas use are shown in Figure 33, page 91).

Of the 16 billion BTU annually consumed as natural gas, 20%, or 3.3 billion BTU, would be used for water heating. This is important to note because it is possible to displace some of this energy use by using solar collectors (see Chapter V.E., page102).

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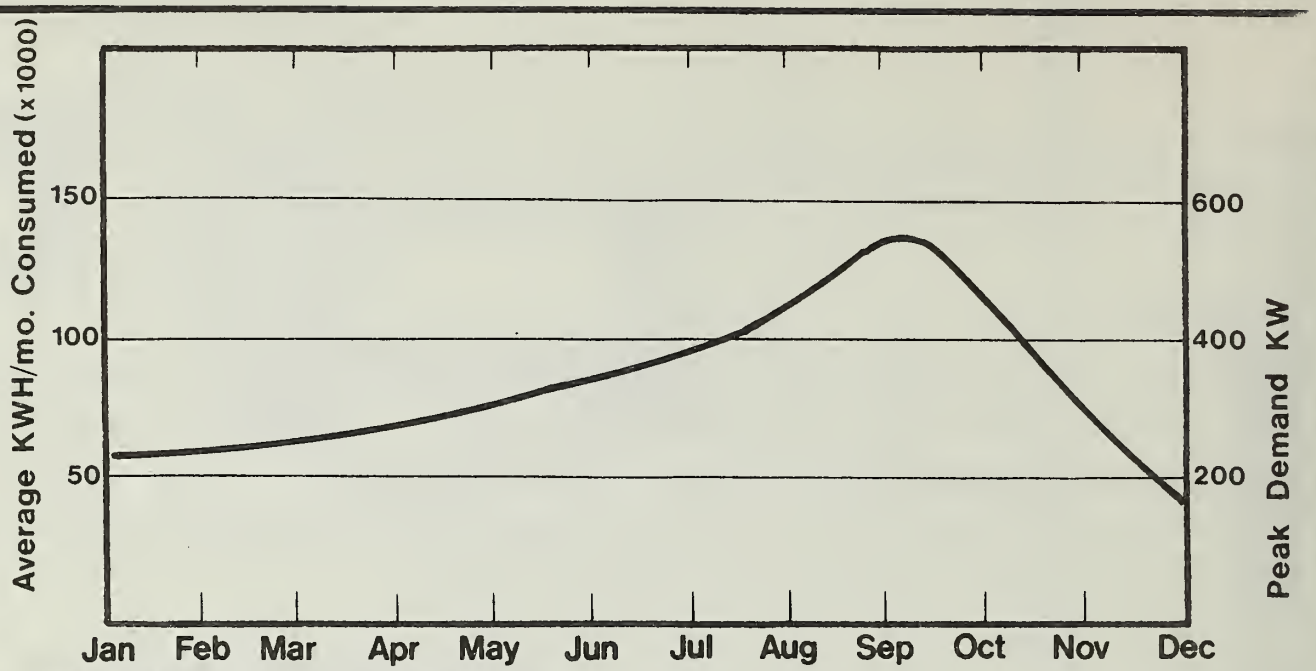
[1]Energy conversions:
1 gallon gasoline = 125,000 BTU
1 gallon diesel fuel = 145,000 BTU
1 gallon lubricants = 140,000 BTU (varies with type of oil
1 kwh = 10,239 BTU

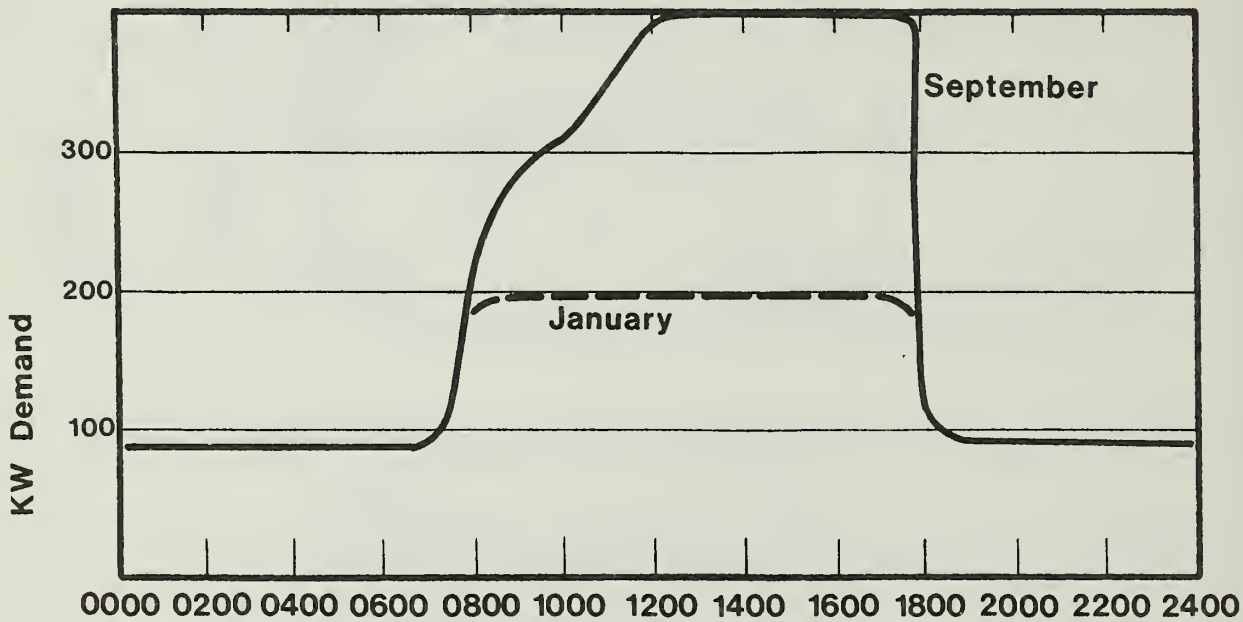
[2]One barrel of crude oil contains 42 gallons and is the energy equivalent of about 5.4 million BTU, although this varies with the type and source of oil.

[3]The estimates of energy use presented in this section were prepared by Charles & Braun, Consulting Engineers, and were based on the following assumptions:

- That all interior spaces would have a design heating load of 15 BTU per hour per square foot.
- A net heating efficiency of 70%.
- Each condo would use 35 gallons of hot water per day.
- Office/retail uses would use 1 gallon of hot water per person per day.
- Condo heating would be accompanied by forced air fans.
- Ventilation rates of 1 cubic foot per minute (cfm).
- One ton of air conditioning capacity per 450 ft^2 of interior area.
- Air economizer would be installed and used.



Monthly Consumption

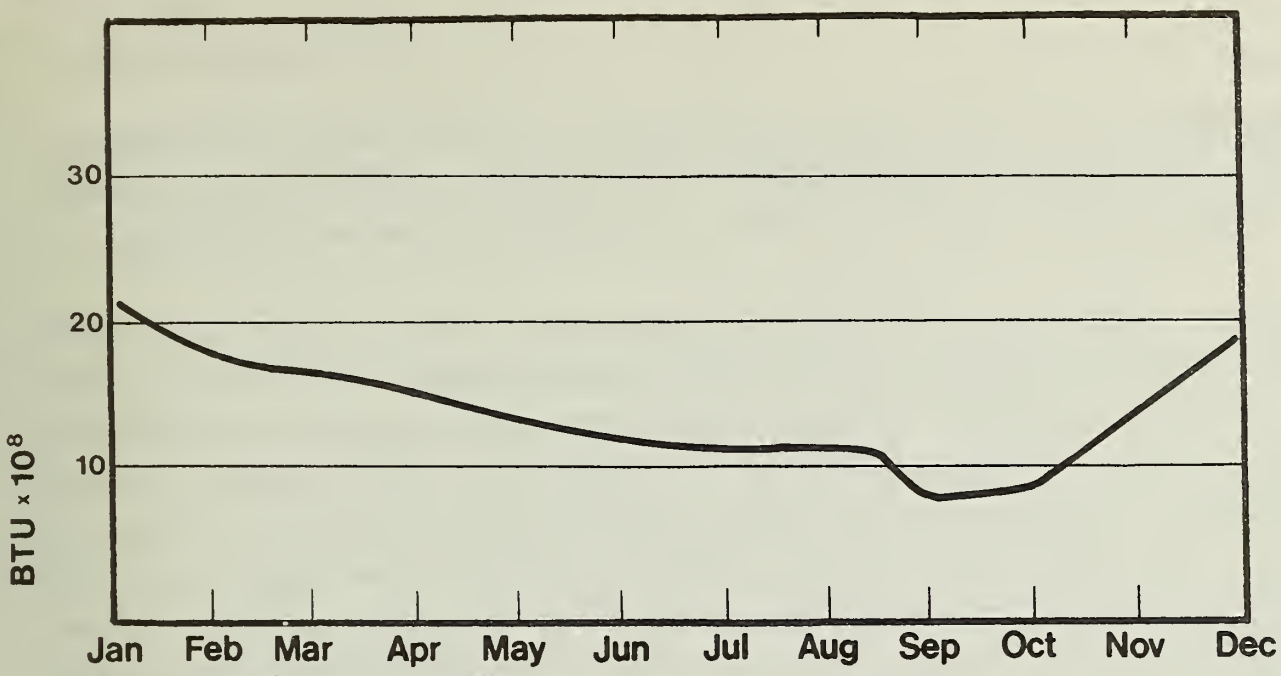


Hourly Consumption

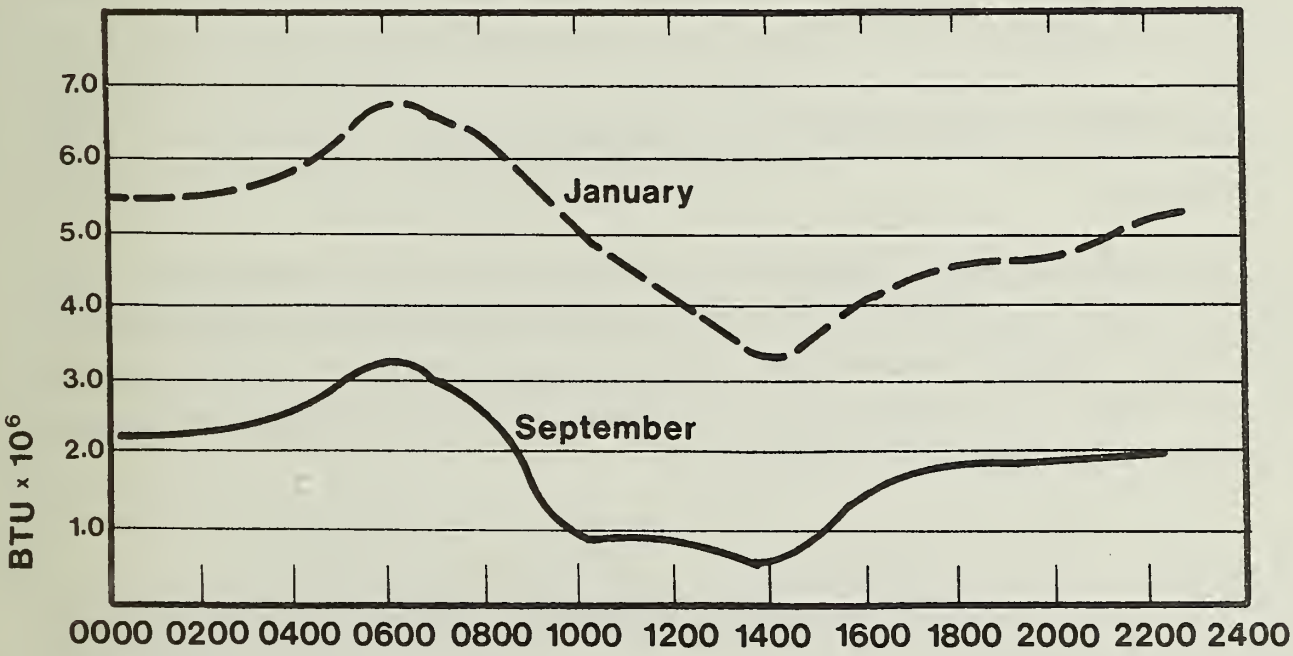
Estimated Electrical Consumption

Source: EIP Corp.

Figure No. 32



Monthly Consumption



Hourly Consumption

Estimated Gas Consumption

Source: EIP Corp.

Figure No. 33

Transportation. Energy used in the form of gasoline for all trips generated by the project would total 61 billion BTU annually which is the equivalent of 2,900 barrels of oil based upon the number of vehicle miles travelled in the transportation section of this report.

Title 24. Title 24 of the California Administrative Code sets energy conservation standards for new buildings in California.[1] The standards dictate allowable heat loss rates for all portions of both residential and nonresidential structures; the proposed project would conform to these standards. Further, the portion of the standards concerning non-residential buildings sets a maximum allowable consumption of energy of 126,000 BTU per square foot annually.[2] Using the energy estimates contained here, this project is predicted to consume about 106,000 BTU per square foot annually. However, Title 24 requires that compliance with this portion of the standards be evaluated using an Energy Commission-approved computer program, immediately prior to the issuance of the building permit. At this time it is not clear whether this project would comply using the state approved program. If it does not comply, modifications to the design would be made to achieve compliance.

H. EMPLOYMENT, HOUSING AND FISCAL CONSIDERATIONS

1. Employment

Demolition of the buildings on the project site, and excavation and construction of the Welsh Commons project would displace 3 people. Demolition, excavation and construction activities are expected to take about 14 months and generate about 550 years of construction labor.[3] The average construction employment would be about 440 full-time positions at any one time during construction.

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[1] California Energy Commission, Energy Conservation Design Standards for New Residential and Non-Residential Buildings, Title 24 to the California Administrative Code, Sacramento, 1978.

[2] The standard also covers buildings where more than 30% of the space is for non-residential uses; the proposed project is in this category.

[3] An estimated $30,000,000 (1981 dollars) would be spent during demolition, excavation and construction. Assuming labor costs would be about 55% of the total ($30,000,000 x 55% = $16,500,000), including direct wages, payroll taxes and fringe benefits, and assuming an annual cost including wages, taxes and benefits of $30,000 per construction worker.

As a result of the multiplier effect of project construction, about 852 additional person years of employment would be generated in the Bay Area.[1] Some of this secondary employment would be in San Francisco, although it is difficult to estimate the amount.

When the proposed building is at full occupancy, about 200 permanent jobs would be provided for service/wholesaling, light industrial, retail, janitorial/maintenance and residential support functions (service jobs such as security, housecleaners, etc.). This could include about 112 service/wholesaling workers (service repair workers, stock and warehouse workers, clerical support, etc. at 1 worker per 500 square feet of space for 55,600 square feet),[2] 38 light industrial workers (at 1 worker per 500 square feet of space for 19,000 square feet),[2] 34 retail workers (at 1 worker per 350 square feet of retail space for 12,000 square feet),[3] 7 janitorial/maintenance workers (at 1 worker per 12,500 square feet for the non-residential portions of the building)[3] and about 9 positions for building security, parking garage and residential service.

The jobs generated by the proposed project would result in additional employment through the multiplier effect in the Bay Area. Assuming that the new jobs created as a result of the project were primarily in retail and wholesale industries, about 235 additional jobs in other sectors of the Bay Area economy could result.[4]

The total number of permanent new Bay Area jobs that would be supported by the project's addition to the stock of new office support, retail and service industrial space (and new residential units) would be about 435 (the 200 direct jobs plus the 235 jobs induced by the multiplier).

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[1] All multipliers are based on Bay Area Input-Output Model from Cooperative Extension Service U.C. Berkeley, Bay Area Imput - Output Model, 1967-1974. This is the equivalent of a multiplier of 1.55 in that for every 1 job created by the project, an additional 1.55 secondary jobs would be created.

[2] Robert W. Burchell and David Listokin, The Fiscal Impact Handbook, Center for Urban Policy Research, New Brunswick, New Jersey, 1978, page 138.

[3] Spear and Main EIR, EE80.349, certified 11 February 1982.

[4] This is the equivalent of a multiplier of 1.18 in that for each job created by the project, an additional 1.18 secondary jobs would be created (based on Bay Area Input-Output Model 1967-1974).

2. Housing

The proposed project wholesale, retail and service industrial space would increase the demand for housing in San Francisco. It is anticipated that a portion of the people newly employed in San Francisco as a direct result of the Welsh Commons project would move to the City, occupying available housing units. The project would include 160 housing units, possibly meeting some of this additional demand. The proposed Welsh Commons project is designed to sell units in the $90,000 to $180,000 dollar range. About 20% of downtown office workers moving into San Francisco could afford the $90,000 units.[1] Management level employees in the project would also find affordable housing in Welsh Commons, but it is unlikely that most other project employees who do not have substantial equity in their current homes would be able to afford mortgages on the Welsh Commons units.[2] However, San Francisco residents who do occupy the project may free up lower priced units suitable for project employees. It is estimated that 75% of the project employees could afford median-prices rental housing in San Francisco.[3]

The housing stock in the City is expanding, but not at a rate to accommodate the needs of all the employees who move into San Francisco. Many factors including job growth and scarcity of efficient development parcels have caused housing prices to rise both in the City and in the Bay Area. Continued high interest rates have also severely impacted housing affordability.

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[1] Monthly housing costs assume 20% downpayment and 16 3/4% annual interest on a 30 year mortgage office worker income levels given in: San Francisco Urban Renewal Association Impact of Intensive High Rise Office Development - Detailed findings, Table 21, page 117 (1975). Income levels were inflated 78% to 1982 dallars per: U.S. Burean of Lab Statistics Area Wage Survey: San Francisco - Oakland Metropolitan Area March 1981. Washington D.C. June, 1981, p. 12.

Households are assumed to level 30% of income on housing.

[2] Management salaries given per: Administrative Management Society, Middle Management Salary Survey 1980-1981 San Francisco. 1981 all other salaries given in: U.S. Bureau of Labor Statistics Area Wage Survey: San Francisco - Oakland Metropolitan Area, March 1981, Washington D.C. June, 1981, pp, b-11. Monthly housing cost for $90,000 homes is $1,012 based on assumption outlined in footnote 3. Assuming no prior equity, a household must have a $40,000 annual salary to qualify. About 5.5% of management salaries meet or exceed this amount. No mean salaries for workers in sales/retail, janitorial, building security, or service industrial reach this amount. Monthly housing costs appropriate for mean wages in these sectors range from $260 to $450.

[3] San Francisco median rental data is presented in Table 4, Housing Prices in San Francisco, 1982, page 44.

The 160 units proposed in the Welsh Commons project would add to the housing stock of the City.

3. Fiscal Considerations

REVENUES

Assessed Valuation and Property Tax. Table 14 (page 96) summarizes all revenues associated with the project. Based on replacement costs, the minimum fair market value of the proposed project would range from $37,200,000 to greater than $50,000,000 in 1981 dollars (depending on the individual cost of the condominiums which range from $90,000 for studio to $180,000 for a 2-bedroom unit).[1] Assuming the property would be assessed on the basis of full replacement costs, the property tax revenue from the project at 1% of full market value allowed under Proposition 13 plus the additional levy for repayment of existing bonds previously approved by the electorate (the current total tax rate for the 1981-1982 fiscal year is $1.19 per $100 of the full cash value) could be $442,700 to more than $595,000. It is not known at present how the property taxes would be distributed in the year of completion of the project (1983); however, applying the 1981-82 rate, San Francisco could receive from $351,100 to more than $471,800.

Subtracting the market value of the existing land and improvements on the project site which total about $1.3 million, the net addition of the San Francisco property tax base would be from $35.9 million to more than $49 million. The net increase over existing composite property tax revenues to San Francisco would be from $335,500 to more than $456,200.

Business Tax. Business tax is actually comprised of 2 taxes: gross receipts tax and payroll tax. Revenues from these taxes would be generated by businesses occupying the project and by the owners of the project who would pay a tax on the rents they receive. Payroll taxes from the proposed project could be in excess of $30,000 annually. Gross Receipts tax is estimated to be about $2,700.

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[1] Full replacement cost estimates include the interim financing (estimated at 15% x $30,000,000 construction costs = $4,500,000) and leasing costs (estimated at 5% x $30,000,000 = $1,500,000).

TABLE 15

ESTIMATED PROJECT REVENUES AT FULL OCCUPANCY

(1982 Dollars)

Source	Current	Project	Net Change
Property Tax[1]	$15,600	$442,700-595,000	$ 427,100-579,400
Payroll Tax[2]	600	31,400	30,800
Gross Receipts Tax[3]	-	2,700	2,700
Utility Users Tax[4]	-	12,000	12,000
Sales Tax[5]	-	16,300-19,300	16,300-19,300
	$16,200	$505,100-660,400	$ 488,900-644,200

[1] Assumes property tax distribution as in 1981-1982; it may be different in coming years. The San Francisco Unified School and Community College Districts, Bay Area Air Quality Management District and BART would also receive property tax revenues. The ranges are based on 1% of total value (under Proposition 13) and 0.19% (based on bond payments). The bond rate would change as the bonded indebtedness is retired.

[2] Based on an increase from 3 to 200 employees, 75% of wages assumed eligible for tax at 1.1% rate, $19,000/yr. average salary. Employee count based on one worker per 500 sq. ft. of support space; one worker per 300 sq. ft. service/industrial space, are per 500 sq. ft. service/retail space. Based on estimates in The Fiscal Impact Handbook, Robert W. Burchell and David Listokin, 1978, Center for Urban Policy Research, New Brunswick, N.J., p. 138.

[3] Rental schedules estimated at 35¢/sq/ft/month for existing; $1.00 for projected service/industrial and $1.25 rate for projected service/retail and office support.

[4] Water: The estimated annual water bill for the project is $5,460 based on 1.3 million cubic feet per year estimated use x 41.4¢ per 100 cubic feet. Sewerage bill estimated at $12,130 based on $1.15/100 cubic feet, flow assumed to be 80% of water consumption. Tax on total two bills at 5% is $800.

PG&E: The total annual PG&E bill is estimated at: $56,000 for natural gas (160,000 therms/annum at 35¢/therm) and $85,000 for electricity (1.7 million kwh at 5¢/kwh). Energy consumption based on totals in Section IV.G., Energy Impacts. Tax @ 5% = $7,050.

Telephone: The estimated annual phone bill is $4,120 based on $30/month per residential unit and $1,000/5,000 square feet commercial/month. Tax @ 5.5 = $4,120.

[5] Sales tax for the 12,000 square feet of service/retail space was estimated at $13,500 - 16,500 annually based on a $90-110 per square foot annually and 1.25% of purchases as San Francisco's share of the sales tax revenues. The 200 employees at the site were assumed to make $224,600 of local purchases a year, of which again 1.25% would go to the City. $224,600 is based on an estimate of $1,123 in purchases per employee.

Sales Tax. Sales tax revenue would be generated both by the purchases made by the project employees and the retail sales made in the retail space on the first floor of the proposed Welsh Commons. Sales tax is estimated to range from $16,300 to $19,300.

Utility Users Tax. Utility users tax revenue is paid on the cost of electricity, gas, water, and telephone use. Tax for the entire project is estimated to be about $12,000.

Other Local Revenues. A parking tax of 15% of gross sales would be levied on those portions of the parking garage that are not reserved for residents. A real estate transfer tax of $5 per $1,000 selling price of the condominium units would accrue to the City when the condominium units are resold. The actual rate of resale and the probable price are not known at this time.

Total Revenues. The potential increased revenues to San Francisco could range from $502,000 to more than $663,600; however, this range is subject to a number of variables that could affect the estimate:

- Property tax distribution could change in the ensuing years
- Payroll tax could vary according to the salaries of the employees in the proposed project
- Rents of the office support, retail, and industrial/service space and the sale of the condominums may change, thereby affecting the gross business tax and real estate transfer tax
- Cost for utilities, particularly telephone are also variable

COSTS

Public service costs created by the project are difficult to quantify. Existing services near the site can accommodate the proposed project without additional facilities and/or manpower, assuming that the project is constructed in accordance with the public codes. Existing public works costs for street repair, drains, lighting and cleaning would not measurably increase. Police and fire protection costs would not increase due to the proposed project.[1]

[1] Captain Robert Forni, Southern Station, San Francisco Police Department, telephone conversation, 12 May 1981, Chief Joseph Sullivan, Division of Planning and Research, San Francisco Fire department, letter communication 13 May 1981.

The estimated costs for the MUNI by users of the proposed project could cost $21,200 based on 210 morning and evening peak hour trips per day (see IV.D. Transportation, page 65).[1]

I. CUMULATIVE PUBLIC SERVICES

The San Francisco Police Department indicates that increased construction in the downtown area could result in an increase in crime due to the resulting increase in population and property value. The Southern District Police Station indicates that it would not require additional personnel or equipment to serve the proposed project.[2]

Cumulative development would eventually increase the demand for police services because of the resulting additional population, property and traffic. Because most new downtown office development incorporate security systems and personnel in their plans, they typically require fewer public police services than do older but similar developments. Internal security arrangements in the proposed building would include building security staff. Additional street activity due to increased development could decrease incidence of crime related to empty streets, such as violent sidewalk robberies.

San Francisco is experiencing accelerated development in the downtown area.[3] Proposed, approved or under construction cumulative development in the South of Market area, consisting mostly of highrise commercial office structures, would add about 9.5 million square feet of gross floor area to the downtown area (including the proposed project). It can be anticipated that the number of fire incidents would increase with the number of people occupying the district.

[1] The net marginal cost (or increase in the deficit for MUNI operations) per peak hour ride is $0.3886. Bruce Bernhard, "The Marginal Cost of Peak Period MUNI Passenger trips Per Unit of Office Space", San Francisco Public Utilities Commission, February 1981.

[2] Robert Forni, Captain, Southern Station, San Francisco Police Department, telephone conversation, 12 May 1981.

[3] Bendix Environmental Research, Inc., Environmental Consultants and Fire Protection Engineers, confirmed by Emmet D. Condon, Deputy Chief, San Francisco Fire Department, September 24, 1981.

Since the new highrise buidings must comply with the Life Safety provisions of the San Francisco Building Code, most fires in these buildings can be expected to yield to minimum response by the Fire Department. Since all of these buildings will be of Type I construction,[1] the chance of fire that spreads from building to building is relatively small. For example, when the old and highly combustible Produce Market was replaced by the highrise buildings of the Golden Gateway Redevelopment Project, the external fire protection requirements of the Fire Department decreased.

On the average, replacing older, more vulnerable, low occupancy structures with higher quality, greater occupancy high-rise buildings probably has no measurable effect on the need for fire protection.

J. GROWTH INDUCEMENT

The proposed project would add approximately 87,000 net square feet of commercial and retail space in San Francisco, and provide 160 new housing units.

The project would create 200 new jobs on-site, and indirectly create 206 jobs in regional secondary employment. To the extent that the project attracts new residents or commuters who would not have been attracted to San Francisco, the project may be viewed as employment-generating and growth-inducing. The small scale of the leasable spaces and mixture of uses, however, reflect the intention of the project to provide new space for services supporting other economic activities in the City. The retail space within the project is intended primarily to serve residents and employees of the project and its immediate neighborhood.

The chief growth-inducement effects of the project are locational, as residential units would be introduced into a primarily light-industrial area, and because the proposed project would have a higher level of commerce and employment than is now typical for the area. In this sense the project could encourage the development of other high-intensity uses in the area.

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[1] Type I buildings have structural elements made of reinforced concrete, reinforced grouted masonry, reinforced hollow concrete masonry or steel; and the exterior walls, roofs, floors and some inner walls of "fire-resistive incombustible construction," San Francisco Building Code Section 1801.

V. MITIGATION

A. VISUAL QUALITY AND URBAN DESIGN

Measures Proposed as Part of the Project

The project block would contain street trees along Fourth Street and the south portions of Freelon Street to provide visual interest and pedestrian scale in an area of industrial and warehouse land uses. Trees and shrubs would also be provided within open air terraces on interior portions of the project for visual interest. Brick would be used on exterior building surfaces to compliment brick used on adjacent structures in the project area. Upper levels of the structures would be stepped upward from Fourth Street providing variation in the building's external form while reducing the perceived bulk and mass of the structure. Windows would be provided at ground level allowing pedestrian views of internal retail and wholesaling building spaces.

Measures Considered by the Project Sponsor

If upper portions of the project were constructed less than 105 feet in height, the project would relate more directly to the scale, bulk and height of the existing 1 to 3 story industrial buildings that surround the project site. Restricting construction to the 50-foot height limit currently in effect would avoid setting a precedent for more mid-rise structures in the future near the project site. However, the project sponsor does not propose a lower structure for the project site because the project would become financially impractical, i.e., the project sponsor estimates the ratio of interior utility, elevator, parking and other support space is equitably balanced with leasable and residential sales space.

Street trees continuing along the north portion of Freelon Street, Zoe Street and Welsh Street on the project block would enhance the pedestrian environment providing visual interest and pedestrian scale to the project. Street trees, however, are not proposed for the above sidewalk areas because of the approximate 7-foot sidewalk width. The project

sponsor feels that street trees within a 7 foot wide sidewalk would obstruct pedestrian flow, inconveniencing foot travel around the project site and interferes with pedestrians entering or leaving vehicles along the curbs. Expanding the sidewalk width to allow street trees would require setting the first floor of the structure further back from the curb line, thereby reducing interior floor areas at the ground level. Reduced interior floor areas has been rejected by the project sponsor to maintain the ratio of support space to leasable and saleable space as noted above.

B. TRANSPORTATION

Measures Proposed as Part of the Project

Transit use by employees would be encouraged by the sale of on-site BART and Muni passes.

The project sponsor recognizes the need for expanded transportation services to meet the peak demand generated by cumulative office development in downtown San Francisco to which this project would add; therefore, the project sponsor has agreed to contribute funds for maintaining and augmenting transportation service, in an amount proportionate to the demand created by the project, through a funding mechanism to be developed by the City.

The project sponsor has agreed to provide secure and safe bicycle parking facilities relative to the demand generated by project occupants.

Subject to approval by the City Department of Public Works, (and other concerned agencies), on-street parking would be prohibited on Freelon Street between Fourth Street and the project driveway, and on Welsh Street from the truck dock to Fourth Street.

Upon completion of the project, the project sponsor has agreed to implement a flexible time system (staggered working hours) for employee and project residents working hours in consultation with the Department of City Planning. The project sponsor would also provide car and van pooling for employees and project residents commuting to work in the proposed project in cooperation with RIDES for Bay Area Commuters, or with other such enterprises.

Measures Under Consideration by the Project Sponsor

Subsequent to approval of the project, the sponsor would conduct a survey, using a method approved by the Department of City Planning, to determine the actual trip generation, trip distribution, and modal split of project occupants, and actual pick-up and drop-off areas for carpoolers and vanpoolers. The results of this survey would be made available to the Department of City Planning. Alternatively, at the request of the Department of City Planning, the project sponsor would provide an in-lieu contribution for an overall transportation survey of the Downtown area to be conducted by the City.

Upon occupancy of the project, the sponsor would conduct a survey of parking needs for tenants. A parking management program would be developed to allocate the available parking. As an example, a portion of the residential spaces could be available for the area's commercial customers, employees, etc., during the midday period.

C. NOISE

Measures Under Consideration by the Project Sponsor

The project sponsor would use mufflers or shrouds around pile drivers and impact wrenches in order to reduce the impacts described in the impact section by 10 to 15 dBA. In addition to providing shrouds on the pile drivers, the holes for the piles would be predrilled, reducing the depth through which the piles must be driven and therefore the number of blows per pile. Because of the proximity of residential areas, pile driving not be done at night because of the potential for sleep disturbance.

D. AIR QUALITY AND CLIMATE

Measures Proposed as Part of the Project

Wetting of the construction site to reduce resuspension of dust from earthmoving, demolition and construction activities as well as wind erosion of exposed earth surfaces would be done by the project sponsor. Twice-day application of 0.5 gallons of water per square yard of earth surface can suppress dust emissions by 50%.[1]

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[1] Bendahl, Paul et al., California Solar Manual, Department of Energy, Washington, D.C., 1978.

Those measures that would reduce traffic volumes and congestion would also reduce air pollution. They include carpooling, vanpooling and staggered work hours.

Contractors would maintain and operate construction equipment to minimize exhaust emissions. Contractors would be required to cover the loads of trucks carrying excavated material from the site in order to reduce dust and potential spillage onto streets.

Measures Considered by the Project Sponsor

The feasibility of setting up a screening system for interior materials, to avoid those which give off relatively large amounts of toxic gases under normal or fire conditions, would be investigated by the project sponsor.

E. ENERGY

Measures Proposed as Part of the Project

The project sponsor proposes to include specific measures to reduce energy consumption beyond the requirements of Title 24. Such measures would include:

- orientation of the building to maximize use of passive solar energy for space heating (project sponsor would contract a qualified solar architect).
- use of solar heat for domestic hot water; this could supply up to two thirds of the residential demand (about two billion BTU per year) using about 200 4x8 foot south facing collectors on the roof.
- use of natural light to the greatest extent possible
- recovery of waste heat from the air conditioning sytem to preheat domestic hot water
- automated temperature reset in ducts and pipes
- space would be provided for residents for recycling of materials such as glass, metal, paper and newspaper.

[1] USEPA, Guidelines for Development of Control Strategies in Areas with Fugitive Dust Problems, OAQPS No. 1.2-071, 1977.

The cost effectiveness of each of these measures would be evaluated prior to the application for the building permit, the results of these evaluations would be made available to the Department of City Planning of the City of San Francisco.

F. HOUSING

Measures Proposed as Part of the Project

The demand for housing generated by the office and industrial/commercial/retail space of the project would be met by the proposed 160 residential units planned as part of the project.

G. HISTORICAL AND CULTURAL RESOURCES

Measures Proposed as Part of the Project

Should evidence of historic or prehistoric artifacts be uncovered at the site during construction, the project sponsor would: 1) notify the Environmental Review Officer and President of the Landmarks Preservation Advisory Board; 2) require the contractor to suspend construction in the area of the discovery for a maximum of four weeks to permit review of the find, and, if appropriate, retrieval of artifacts; 3) pay for an archaeologist, historian, or other expert acceptable to the Environmental Review Officer to help review the find, determine the significance and identify feasible measures, if any, to preserve or recover artifacts; and 4) implement feasible mitigation measures identified in the course of investigation.

H. SECURITY

As mentioned in the Initial Study, the development would provide internal security measures such as closed-circuit television system, security guard, well-lighted entryways, alarm systems, an emergency communication system, and power supply and water supply to minimize the need for police and fire protection services.

VI. UNAVOIDABLE ADVERSE IMPACTS

A. LAND USE

The proposed project would represent a more intense land use than the low-density light industrial uses that now characterize the area.

B. VISUAL QUALITY AND URBAN DESIGN

The project would introduce a visual contrast to the existing pattern of 1 and 2-story industrial buildings in the area. The 105-foot residential towers would be more than twice as tall as other structures in the existing 50-foot height district, and the complex form of the structure would differ dramatically from the square or rectangular forms of surrounding structures. At street level, the large expanses of glass in the project's retail spaces would contrast with the blank walls and fenestration of the surrounding district.

C. TRANSPORTATION, CIRCULATION AND PARKING

The project would, in combination with other cumulative development, contribute to the increasingly congested conditions on nearby freeway links and ramps.

Increased traffic generated by the project and other development would increase conflicts with truck movements in the South of Market area.

D. NOISE

During construction, project-generated noise would cause some discomfort for nearby workers and residents.

E. AIR QUALITY

Project-generated traffic and traffic from cumulative development would increase emissions of air pollutants. Demolition, earthmoving and construction activities are likely to increase particulate concentrations during the construction phase.

F. ENERGY

Construction would require approximately 120 billion BTU in the form of fuels, electricity and lubricants. The operation of the building would require approximately 1.7 million kilowatt hours of electricity and 160,000 therms of natural gas annually. Annual energy use for transportation would total approximately 340,000 gallons of gasoline.

VII. IRREVERSIBLE ENVIRONMENTAL CHANGES

Irreversible environmental changes resulting from implementation of the proposed project would include the commitment of existing uses to a higher density development and associated modifications to the visual appearance of the site.

Irretrievable commitments of finite resources would include non-renewable energy, fossil fuels and minerals used during construction and throughout the lifetime of the projects.

VIII. SHORT-TERM USE VS. LONG-TERM PRODUCTIVITY

Development of the proposed building would preclude future options for other land uses on the site. Construction activities would take place during the short-term as compared to the long-term period over which the project would exist.

Site development would have cumulative long-term effects in that it would deplete the supply of fossil fuels and natural construction materials and contribute to traffic volumes.

The major long-term effect of the project would be the creation of new employment opportunities, a contribution to the housing supply, and provision of increased light industrial, retail and service wholesaling development. The project would increase revenues to the City.

IX. ALTERNATIVES

A. ALTERNATIVE 1: NO PROJECT

This alternative would entail no change to the project site as it now exists. The 4 buildings scheduled for demolition and the vacant parcel would remain.

With the retention of the project site in its present state, none of the impacts associated with the proposed Welsh Commons Project would occur, however, the buildings on the site would have to be structurally refurbished to accommodate new uses. The existing transportation and air quality conditions (see III.C. and E, pages 29 and 36) would continue on streets around the site. The peak hour level of service on Freelon, Zoe and Welsh Streets would be higher and MUNI load factors would be 1% lower than if the proposed project were implemented.

The area's noise level could be less and there would be less demand on the site for community services. Total composite tax revenues for the project would remain about $16,800 per year, with the property tax increasing at the 2% annual rate allowable under Proposition 13.

The project sponsor has rejected this alternative because the existing buildings and vacant lot contain less than 20% of the floor area allowed at the site, are spatially wasteful and would fail to provide a return on the sponsor's investment.

B. ALTERNATIVE 2: PROJECT SITE AS INDUSTRIAL USE WITH 50 FOOT HEIGHT LIMIT

The project sponsor conducted a market feasibility study for use of the project as industrial space.[1] The authors of the study reviewed recent property transfers in the

[1] Mills-Carneghi, "Industrial Feasibility Analysis, Welsh Commons, San Francisco, California", unpublished study for the Welsh Commons project sponsor, September 1981.

general vicinity of the project site. Current land values in the area ranged from $40 to $70 a square foot and rental rates for industrial space are approximately 35¢ a square foot for ground floor space.

Two analyses showing projections of cost, income and feasibility for the project site were prepared: the first considered the construction of a single-story industrial building;[1] the second examined a proposed mixed use development with the assumption that industrial space would be included in the lower floor.

Alternative 2a: Project site as Industrial Use (Code Compliance) The project under this alternative would contain only industrial use under the existing zoning. Conditional use or other special authorization would not be required for this alternative, as it complies with all regulations of the City Planning Code.

The proposed building in the first analysis would be about 59,000 square feet (City code requires off-street parking and loading facilities that would entail an additional 4,800 square feet for a total of 63,800 square feet, which would cover 100% of the site) containing 85% warehouse space and 15% finished office space, a typical allocation of space in industrial parks. Annual income from this alternative would be based on a monthly rent of 35¢ per square foot on an industrial gross basis. The rent would be comparable to current market rents for large industrial space in the South of Market area. With a 5% vacancy factor, the effective gross income from this alternative would be $235,400. Expenses including management fees and reserves for replacement were projected at 3% of effective gross income. The annual net income would be approximately $146,000. The feasibility of this alternative would be determined by subtracting the project cost from the capitalized value. The net income would be capitalized at 10% resulting in a value of $1,460,000. The estimated cost of the project including the building, sprinklers, asphalt paving, tenant improvements, loan points, land, leasing, overhead and contingencies and developer's return would be $6,856,000.) A loss of $5,395,000 would occur with a 35¢ rental rate. In order for this alternative to reach the

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[1] An alternative that consisted of a 3-4 story building for exclusive industrial use was not considered. Industrial space on upper stories would probably have to be rented for less than the ground floor due the difficulty of transferring material to and from upper stories. A new building intended for only industrial space would not be financially feasible in the South of Market area.

break even point, rents would have to reach $1.15 to $1.20 per month range which would be more than triple the amount that industrial firms are currently paying for space in the area.

Alternative 2b: Project site as Industrial/Mixed Use. The second analysis assumed that the total project could contain 248,000 gross square feet of mixed use (residential/office/-service/industrial) over subterranean parking. The total of 75,000 gross square feet of industrial space would be evenly distributed between the ground floor and second floor, representating about 30% of the total square footage.

The other uses of the site might generate enough profit to help subsidize the marketability of the industrial uses, however, the project sponsor wants to maximize profits and does not wish to have portions of the project provide an unprofitable return.

The cost analysis considered that the industrial space would be 30% of the total cost which would include loan points, land costs, land carrying costs, leasing commissions, overhead and contingencies and developer's return. The total cost of industrial space would be approximately $6,164,000 or about $82 per square foot.

The annual income from the industrial space would be based on 35¢ per square foot monthly rent on the second floor. Industrial space on the second floor is less desirable due to the increased difficulty in moving merchandise to and from the street level. The vacancy factor would be estimated at 5%, expenses for management and reserves would be estimated at 3% of effective gross income. The annual net income produced from the industrial space would be $210,800.

This alternative's feasibility would be based on the project cost subtracted from the capitalized value ($6,164,000-$2,108,000 which results in a loss of $4,056,000). Based on this analysis, it would infeasible to include the 75,000 square feet of industrial space in the proposed mixed use complex. Rents for the industrial space would have to reach approximately 80¢ per square foot on a monthly basis before the break-even point would be reached. Currently this rent level exceeds the rents that industrial firms are willing to pay.[1]

[1] Mills-Carneghi, "Industrial Feasibility Analysis, Welsh Commons, San Francisco, California", unpublished study for the Welsh Commons project sponsor, September 1981.

Implementation of Alternative 2b would require conditional use authorization for residential use in a M-2 District. An industrial use alternative would generate fewer impacts than the proposed project; however, the project sponsors rejected alternatives 2a and 2b because they do not meet the objectives of the project and would be financially infeasible.

C. ALTERNATIVE 3: GUIDING DOWNTOWN DEVELOPMENT; PARKING FACILITY

The Department of City Planning issued Guiding Downtown Development[1] which contains a series of regulatory proposals for managing development in downtown San Francisco. The proposals affect the size, design, and location of major buildings and address the impacts new development could have on housing, transportation, open space, architecturally significant older buildings, and the general environment and livability of the central business district.

Resolution 8982 (adopted by the City Planning Commission 4 June 1981) requires an alternative building proposal that would comply with the proposed controls contained in Guiding Downtown Development. The specific uses allowed in a M-1 District, the basic FAR of 5:1 and the absence of bulk requirements for the project site are not revised from the existing code by Guiding Downtown Development. On Maps 6 and 7 (pages D-1 and D-6) of Guiding Downtown Development, portions of the project site are shown as potential peripheral parking sites and areas appropriate for long-term parking.

This alternative would entail the construction of a 5-floor parking garage with approximately 1,200 parking spaces. The environmental impacts associated with this alternative for traffic circulation, noise and air quality emissions would be about the same as the proposed project (e.g. this alternative could generate about 2,500 - 3,000 trips per day compared to 2,895 for the proposed project).

The demands for public utilities and services, the visual impacts and inducements to growth would be less than the proposed project. Property and parking tax could create a positive cost/revenue ratio. (The actual amounts would depend on the parking rates. The City receives 15% of gross revenues. If 1,400 vehicles parked in the day and evening for an average 7 hours at $6 maximum for 5 days a week, the City could accrue $327,600 in parking tax revenues annually).

---

[1] San Francisco Department of City Planning, Guiding Downtown Development, May 1981. The proposals contained in the report will undergo an extended period of public review and comment as well as an environmental impact assessment. The proposals will then be modified as appropriate in light of the review and assessment.

This alternative would not require conditional use authorization or zoning reclassification, and would respond to policies in the Comprehensive Plan.

The project sponsor rejected this alternative because it would not comply with his objectives of providing a mixed use development with housing units and is financially undesirable.

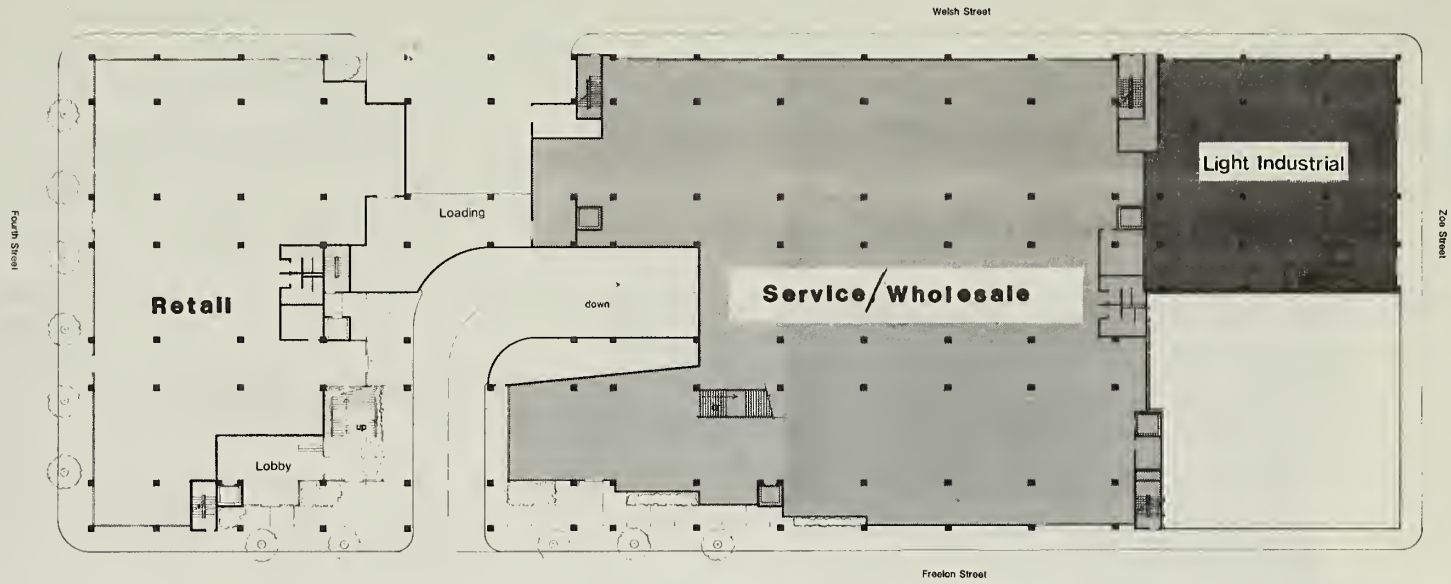
D. ALTERNATIVE 4: PROPOSED PROJECT WITH AN 80-FOOT HEIGHT LIMIT

This alternative would contain the same number of housing units and types of amenities as the proposed project in a 7-story 80-foot structure (compared to the 9-story 105-foot proposed project). The same amount of retail and light industrial space (12,000 square feet and 19,200 square feet, respectively) would be provided and about 55,600 square feet service/wholesaling space would be available (about 3,200 square feet less than the proposed project), (Figures 34, 35, 36, 37, 38 and 39, pages 119 through 126). This alternative would provide 10 fewer parking spaces than the proposed project.

The environmental impacts generated by this alternative would be about the same as the proposed project. Peak hour trip generation would be 1.5% less and total trips would be about 1% less than the proposed project which could be considered as not statistically different than the proposed project.

The building form would be 25 feet lower than the proposed project (Figures 40, 41, 42, 43, 44, 45, 46, and 47, pages 119 through 123) and less pronounced in form, particularly when viewed from highways I-280 and I-80 (Figures 43 and 44, pages 122 and 123). This alternative does not comply with the planning code and would require conditional use authorization for residential use in the M-2 District and for increased residential density (PUD). A zoning reclassification to allow for the proposed 80 foot height would also be required for this alternative.

The project sponsor rejected this alternative because the residential units would not be as financially marketable as the proposed project (due to the project sponsor's assumption that the higher height of the units could demand greater prices) and the overall form and bulk would not be as varied.



North

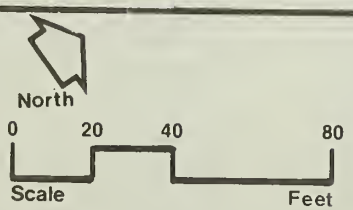
0 25 50 100

Scale Feet

Alternative 4: First Floor Plan

Figure No. 34

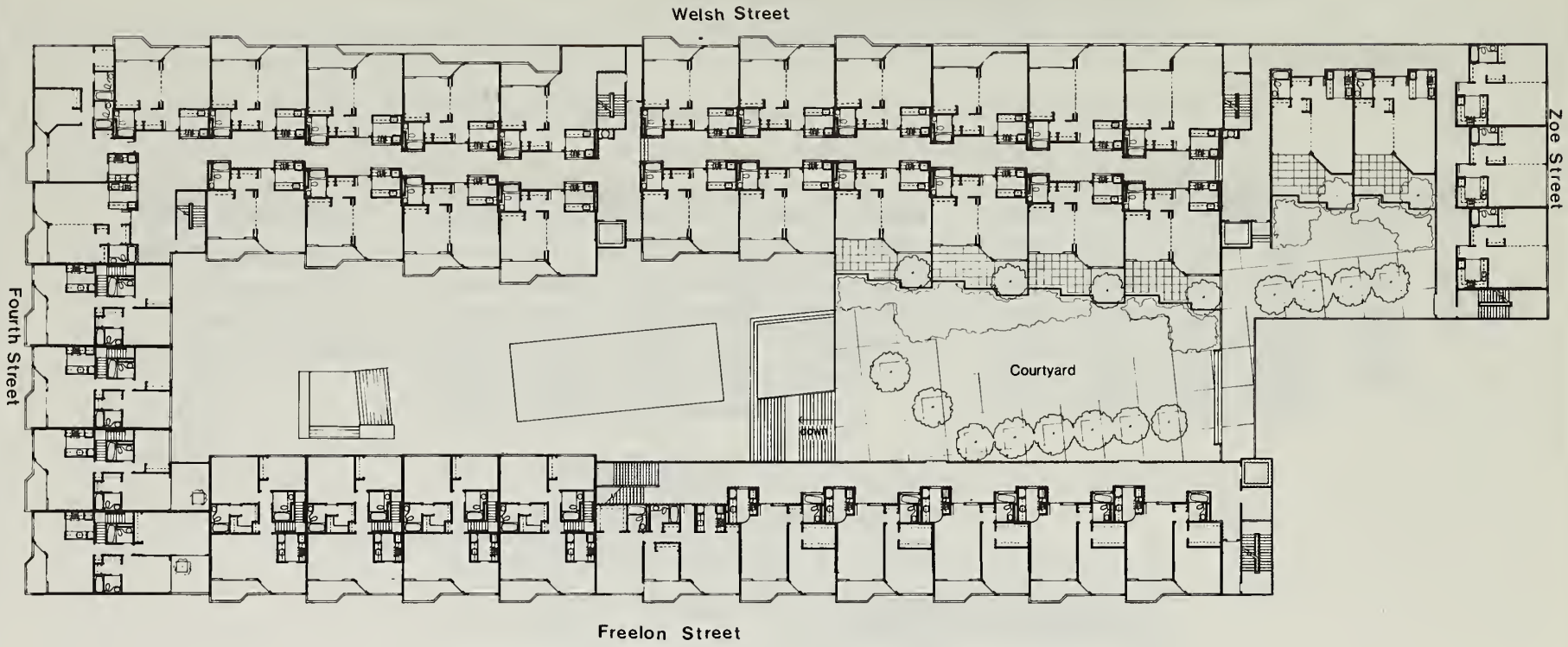
Source: Tai Associates Architects

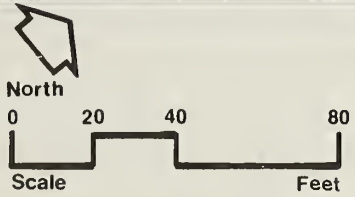


Alternative 4: Second Floor Plan

Figure No. 35

Source: Tai Associates Architects

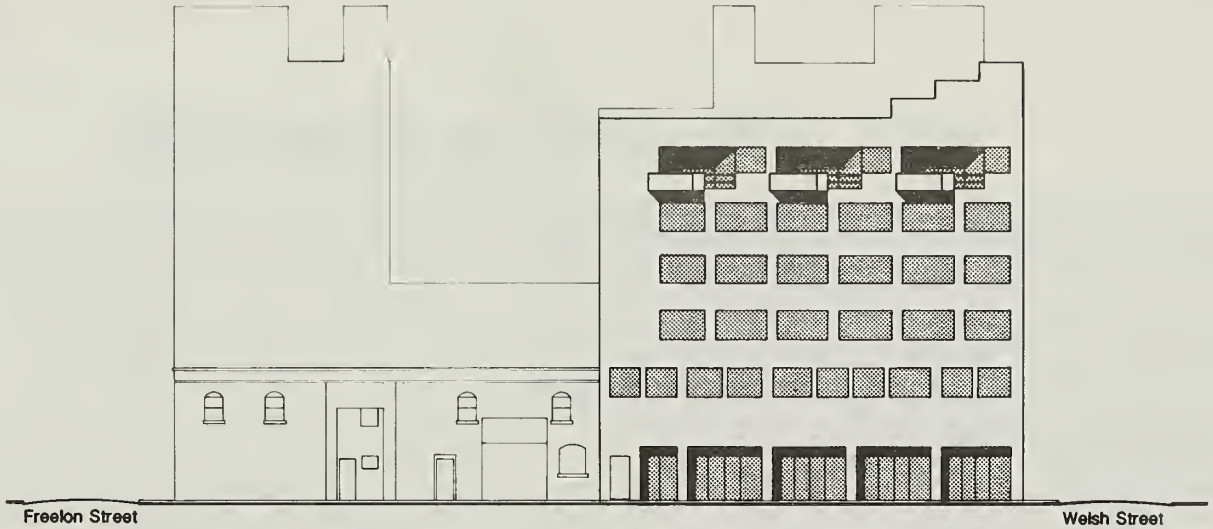




Alternative 4: Third Floor Plan

Figure No. 36

Source: Tai Associates Architects



A. Zoe Street (looking west)

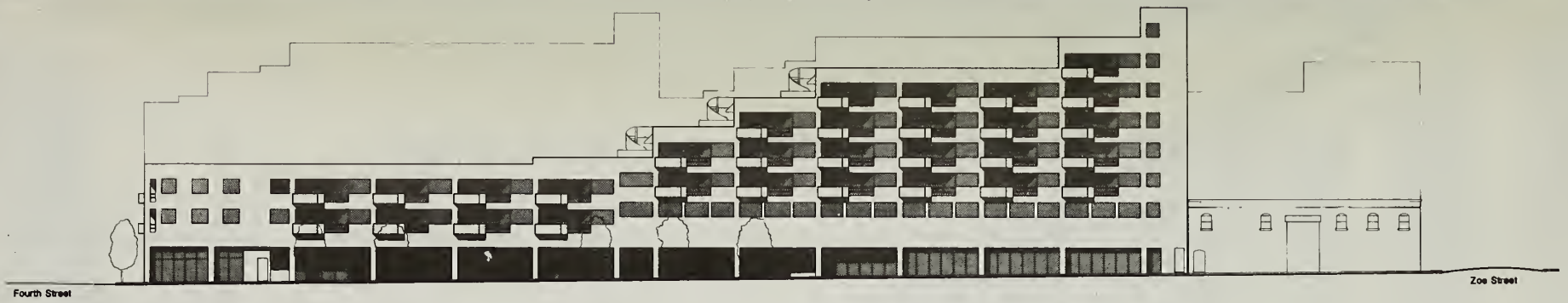
B. Welsh Street (looking south)

Alternative 4: Zoe and Welsh St. Elevations

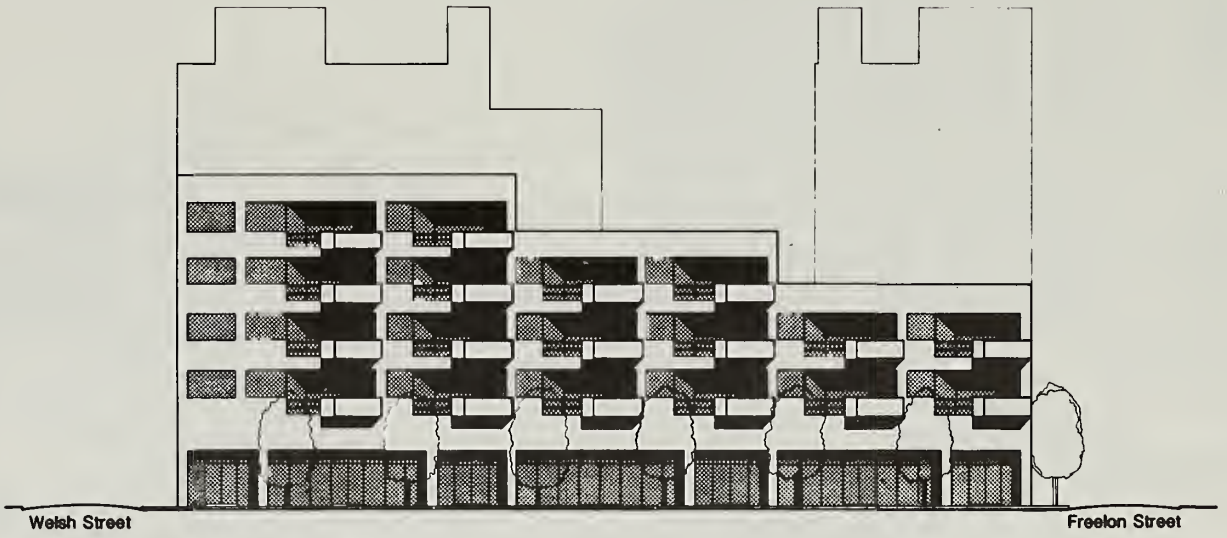
0 10 20 40
Scale Feet

Figure No. 37

Source: Tai Associates Architects



A. Freelon Street (looking north)



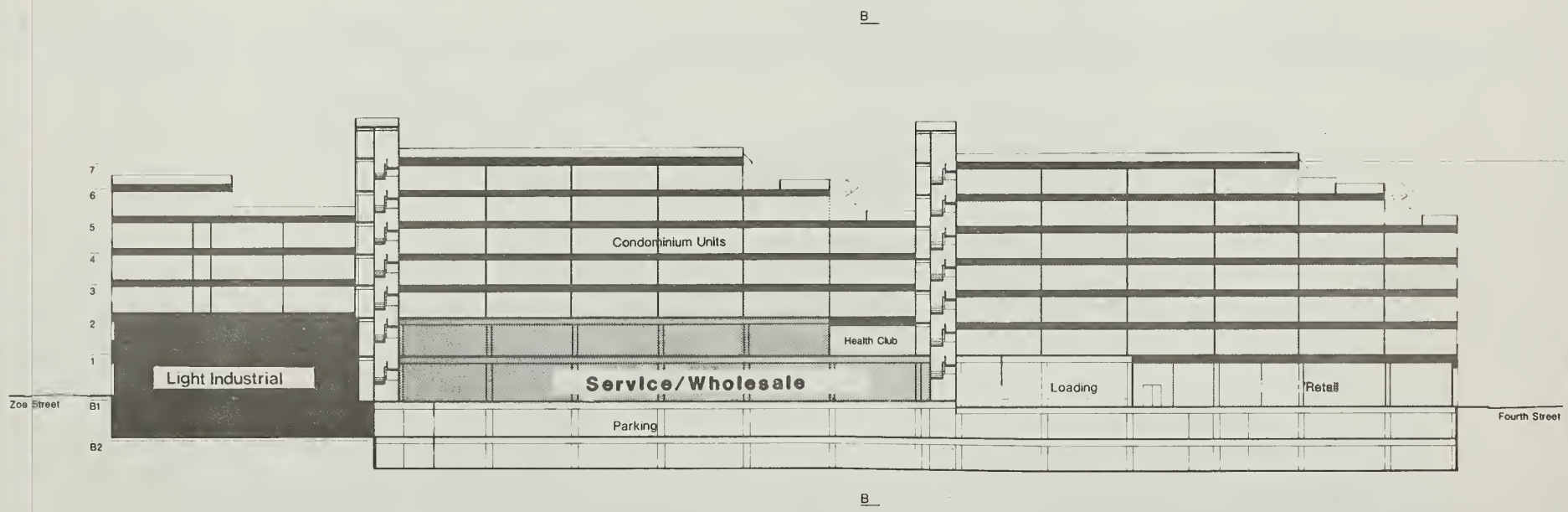
B. Fourth Street (looking east)

Alternative 4: Freelon and Fourth St. Elevations

0 20 40 80
Scale Feet

Figure No. 38

Source: Tai Associates Architects



Alternative 4: Section (facing south)

0 20 40 80
Scale Feet

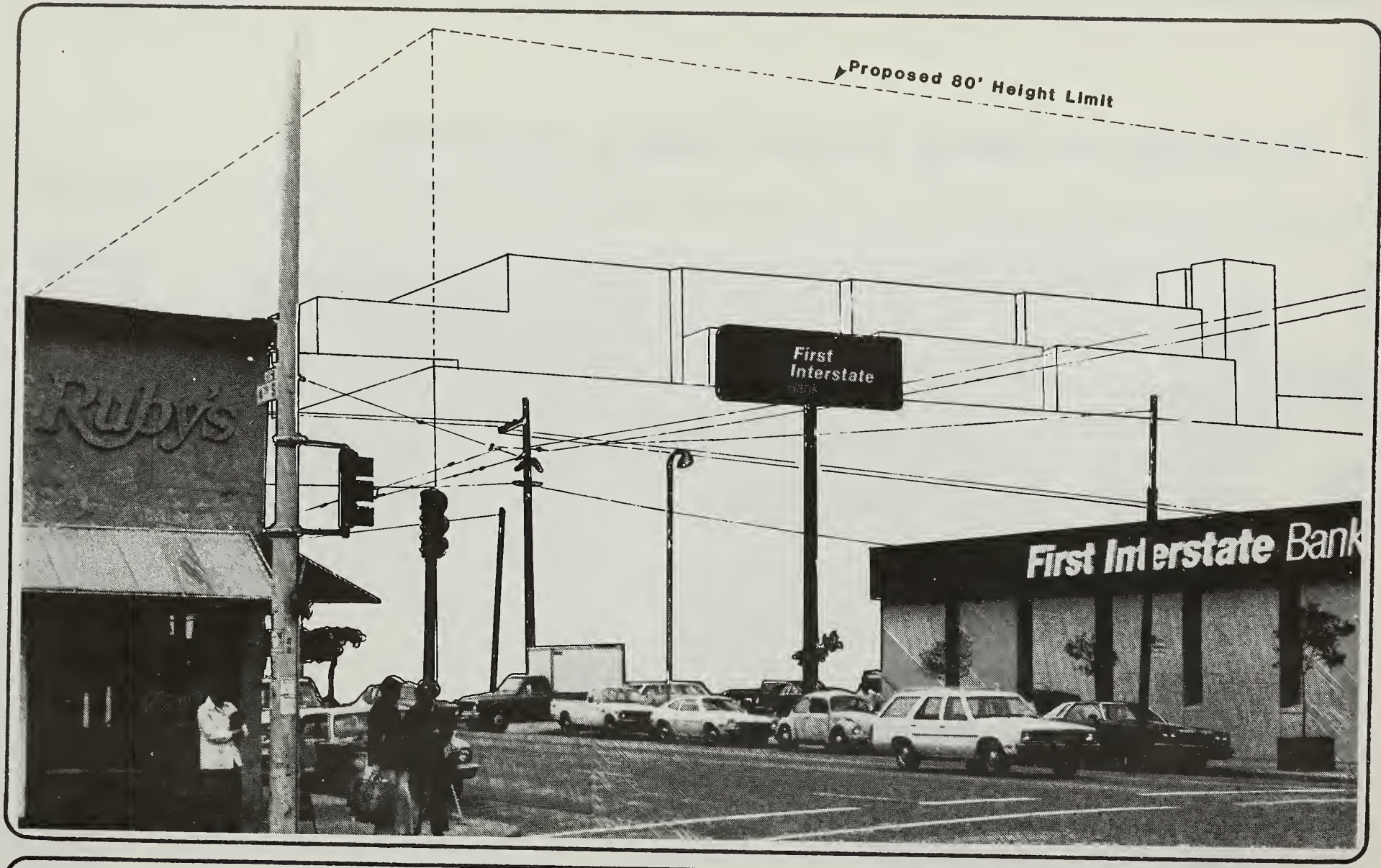
Figure No. 39

Source: Tai Associates Architects

Alternative 4: View looking North on Fourth St.

Figure No.40

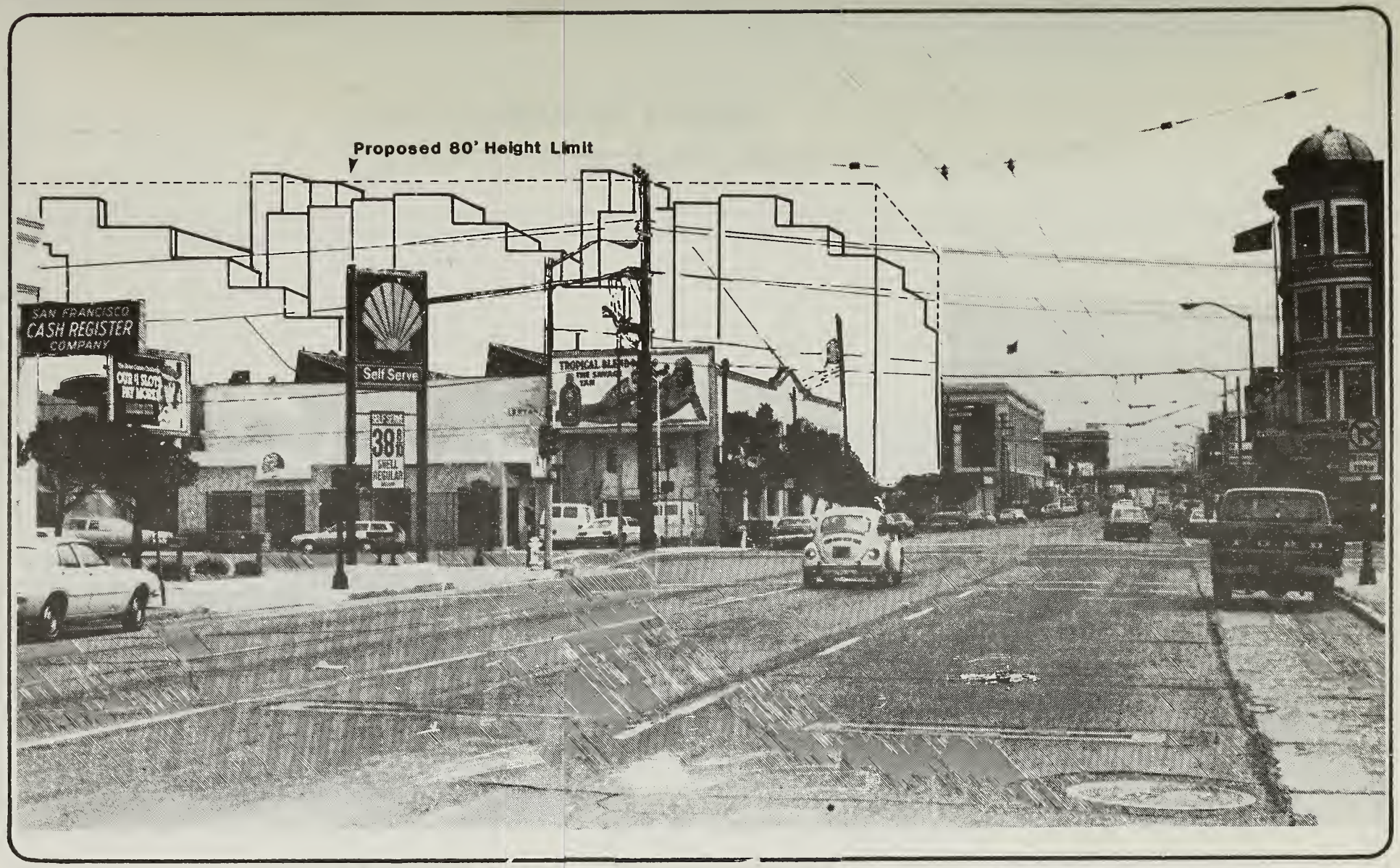
Source: EIP/Tai Associates Architects



Alternative 4: View looking Northeast, Corner of Brannan and Fourth Streets

Figure No. 41

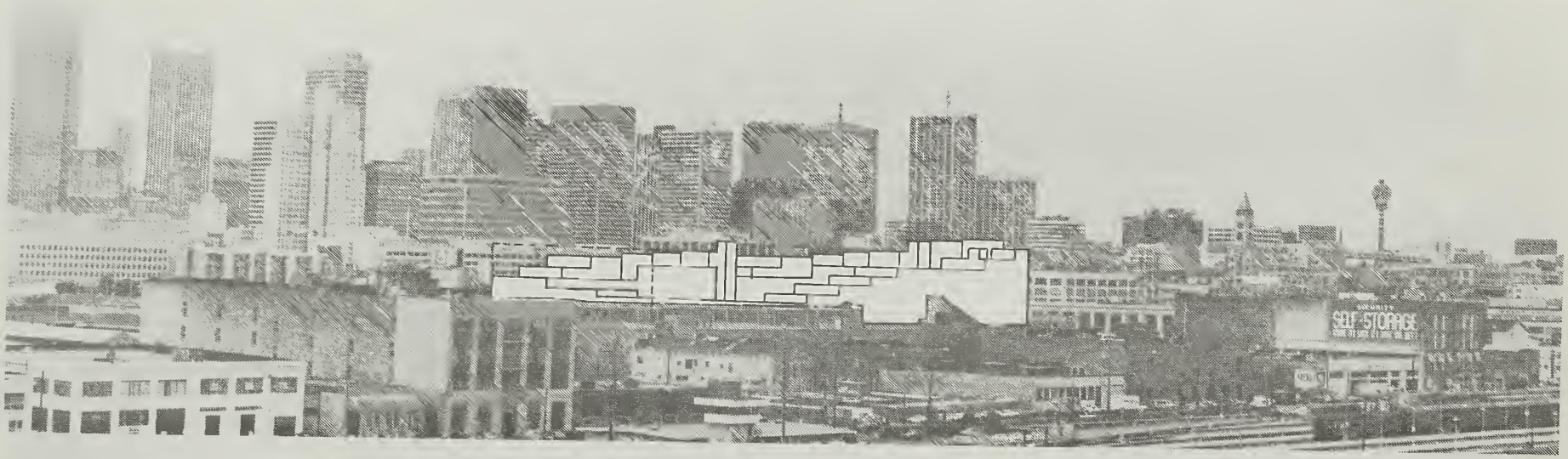
Source: EIP/Tai Associates Architects



Alternative 4: View looking South, Corner of Bryant and Fourth Streets

Figure No.42

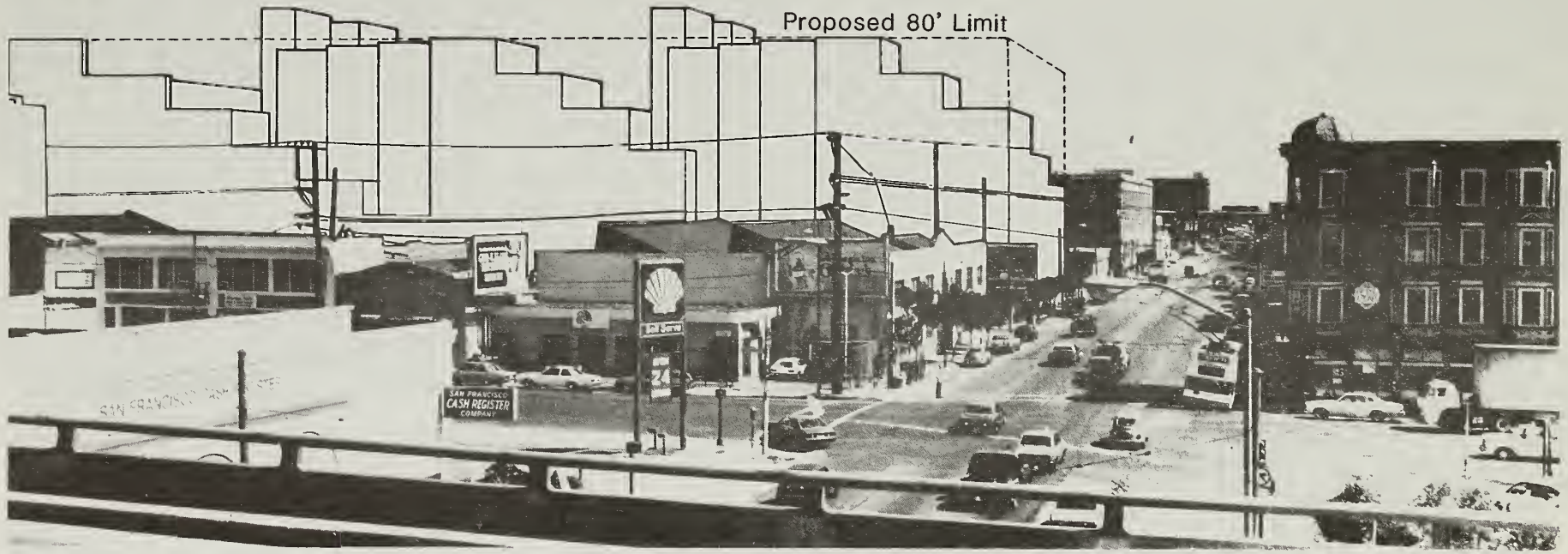
Source: EIP/Tai Associates Architects



Alternative 4: View looking Northeast, from Highway I-280

Figure No.43

Source: EIP/Tai Associates Architects



Alternative 4: Looking South from Highway 101

Figure No. 44

Source: Tai Associates Architects

Alternative 4: View looking North, in front of the Southern Pacific Railroad Station

Figure No. 45

Source: EIP/Tai Associates Architects

Alternative 4: Aerial view looking East

Figure No. 46

Source: EIP/Tai Associates Architects

Alternative 4: Aerial view looking Northeast

Figure No.47

Source: EIP/Tai Associates Architects

E. ALTERNATIVE 5: PROJECT WITH A 50-FOOT HEIGHT LIMIT (CURRENT ZONING)

This alternative would provide for a mixed-use development that conforms to the height limitations as established by the San Francisco Planning code and would respond to the guidelines in Guiding Downtown Development. As with the proposed project, this alternative would provide retail and parking space as well as introduce residential units in a predominantly light industrial area. In addition, 57,000 square feet would be allocated for commercial office space. Because the alternative would conform to existing height limitations, the overall scale of the neighborhood would remain consistent, and visual impacts would be less than for the proposed project.

The alternative incorporates the facades of 3 old brick warehouses into the design of the project which would carry through the rest of the building (Figures 48 and 49, pages 125 and 126). The building's exterior material would be a brick/stucco combination of a light color. The overall effect would be consistent with construction materials and land use characteristics of older, adjacent buildings. Floor plans are shown in Figures 50, 51 and 52 (pages 132, 133 and 134). Elevations are shown in Figure 53 (page 135).

The total project including open space, would contain about 370,000 square feet. Approximately 136,000 square feet would contain 146 condominium units, 107 one-bedroom and 39 two-bedroom units. Fifteen units would be available for low and moderate-income housing. There would be 298 parking spaces on the project site for employees and residents, one more than required. Commercial office space would contain 57,000 square feet and be located on the ground and second levels. Retail space would be increased to 18,000 square feet and be located on the ground level facing 4th Street. Two loading docks would be located on Welsh Street about 180 feet from 4th Street. Three loaking docks would be required by the Planning Code. A downtown goods movement study[1] suggests that the peak hour freight loading activity could be 25% higher. The peak activity could result in a demand for 3-4 spaces for deliveries. During these periods this alternative's truck loading area would be insufficient, causing delivery vehicles to seek on street loading zones or double park. These would be unmitigated impacts.

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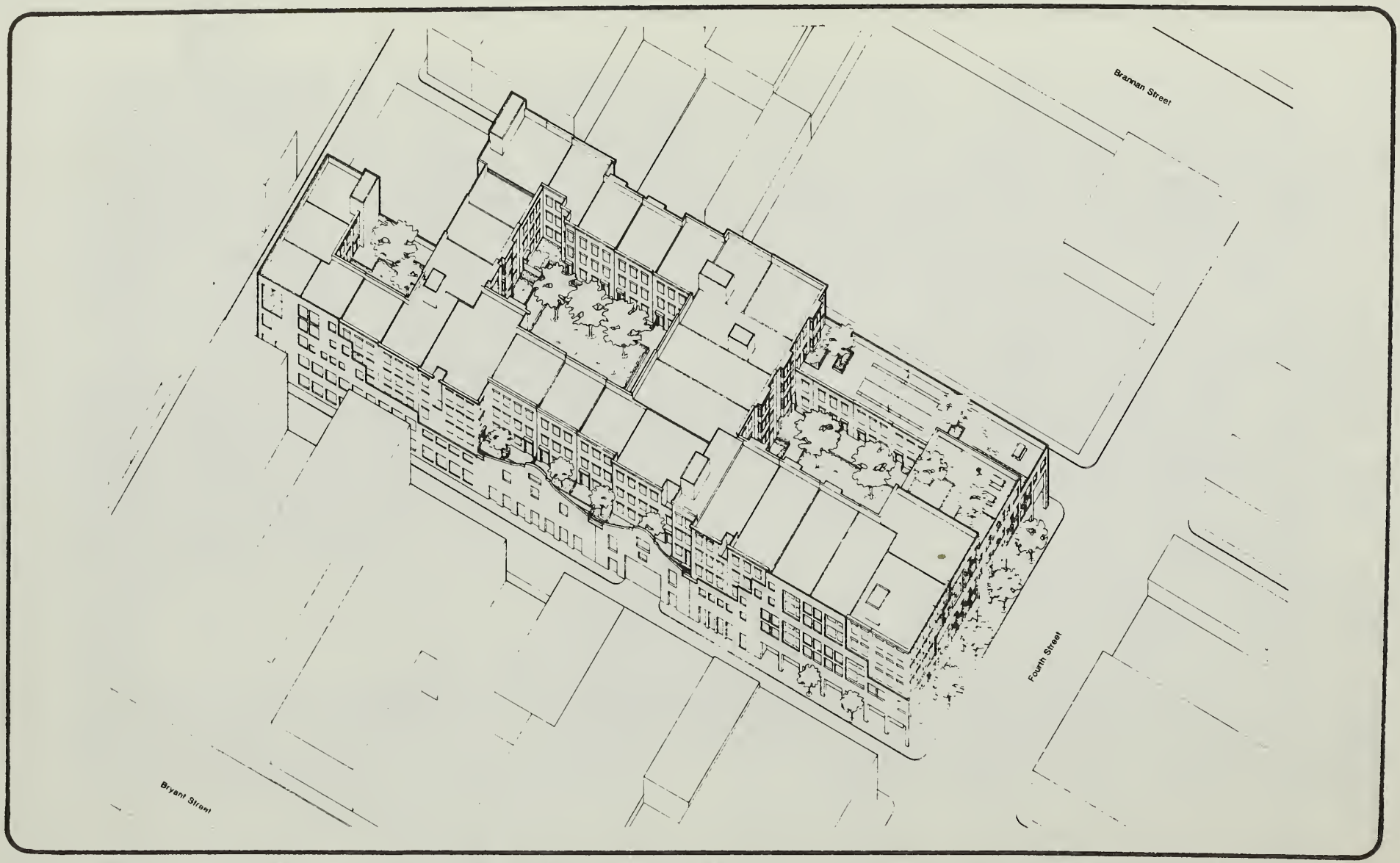
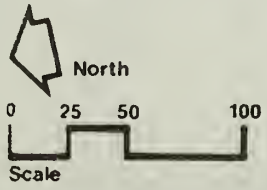
[1] Wilbur Smith and Associates, Center City Pedestrian Circulation and Goods Movement Study, Sept, 1980. pg 73.





Alternative 5: Mixed Use, 50 foot Height Limit

Figure No.48

Source: Tai Associates

By clustering units around 3 controlled courtyards, the project sponsor envisions the alternative to project a visual impact reminiscent of the dense urban communities of Europe. Each courtyard is on a different level (Figure 46), designed to create a sense of urban community. The base level of each would have either small front or rear yards for individual units.

The overall complex is designed so that the courtyards flow from one to another. There would be one roof-top terrace on each of the 4th and 5th floors. A tennis/badminton court would be located on one of the rooftop terraces. A health complex with sauna, whirlpool and exercise room and net game room would be located on the 3rd level. Laundry facilities would also be available on the 3rd and 5th floors. These amenities would be available to the project residents only. A total of 28,000 square feet would be available as public open space (includes covered open space).

Conditional use (CU) authorization for a Planned Unit Development (PUD) would be required for this alternative because it would exceed the permitted residential density for an M-2 District. The nearest residential district to the project site is RC-2 (Residential - Commercial Combined Moderate Density) which allows a density ratio not exceeding one dwelling unit for each 600 square feet of lot area. This would be the density ratio at the project site and would permit 107 dwelling units, i.e. 39 fewer than proposed in this alternative. A CU authorization for PUD would also be necessary for installing fewer loading spaces than required by the Planning Code. Public benefit must be demonstrated if two rather than three loading spaces are approved under the PUD.

The visual and design effects of the alternative would conform to Major New Development Policies 2, 5, and 6 in the Urban Design Plan.[1] The alternative would also comply with the Objectives and Policies of both the Commerce and Residence Elements of the Comprehensive Plan.[2]

The proposed project would represent less than 1% of the cumulative trip generation of downtown development which is under construction, or under formal review . As shown on Table 16, page 130, this alternative would generate about 35% more (p.m. peak hour) person-trips than the proposed project. Trips generated by this alternative would also

[1] Urban Design Plan, page 49.

[2] San Francisco Comprehensive Plan, page 47.

TABLE 16

TRIP GENERATION IN PERSON TRIPS
FOR PROJECT ALTERNATIVE

Land Use	Daily Trip Rate[1,2,3,4]	Daily Trips	P.M. Peak Hr. %	P.M. Peak Hr. Trips	A.M. Peak Hr. Hr.%[1,2]	A.M. Peak Trips
- 145 dwelling units	7/unit	1,015	12%	120	10%	100
- 57,000 sq. ft. commercial office	17.5/1000 sq.ft.	998	20%	200	20%	200
- 18,000 sq. ft. retail/service	100/1000	1,800	10%	180	NA	---
TOTAL		3,813		500		300

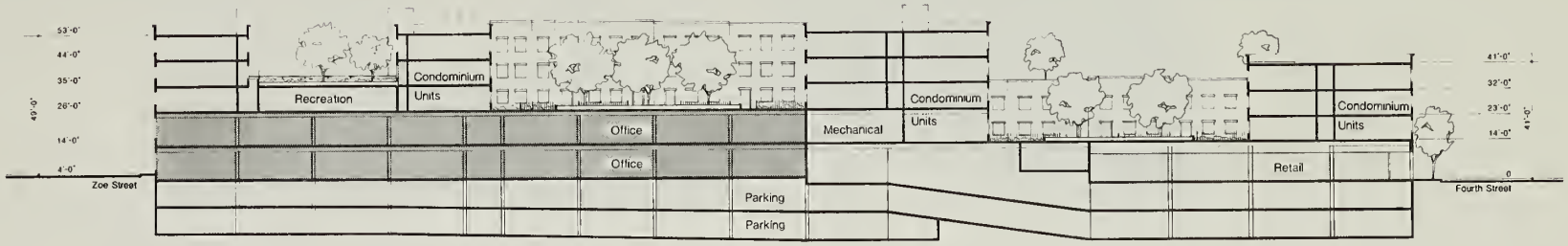
Sources:

[1] Institute of Transportation Engineers, Trip Generation, Virginia, 1979.

[2] California Department of Transportation, 10th Progress Report on Trip Ends Generation, San Francisco, July 1975.

[3] California Department of Transportation, 13th Progress Report on Trip Ends Generation, San Francisco, June 1981.

[4] San Francisco Department of City Planning, Guidelines for Environmental Evaluation - Transportation Impacts, June 1980 (revised October 1980).

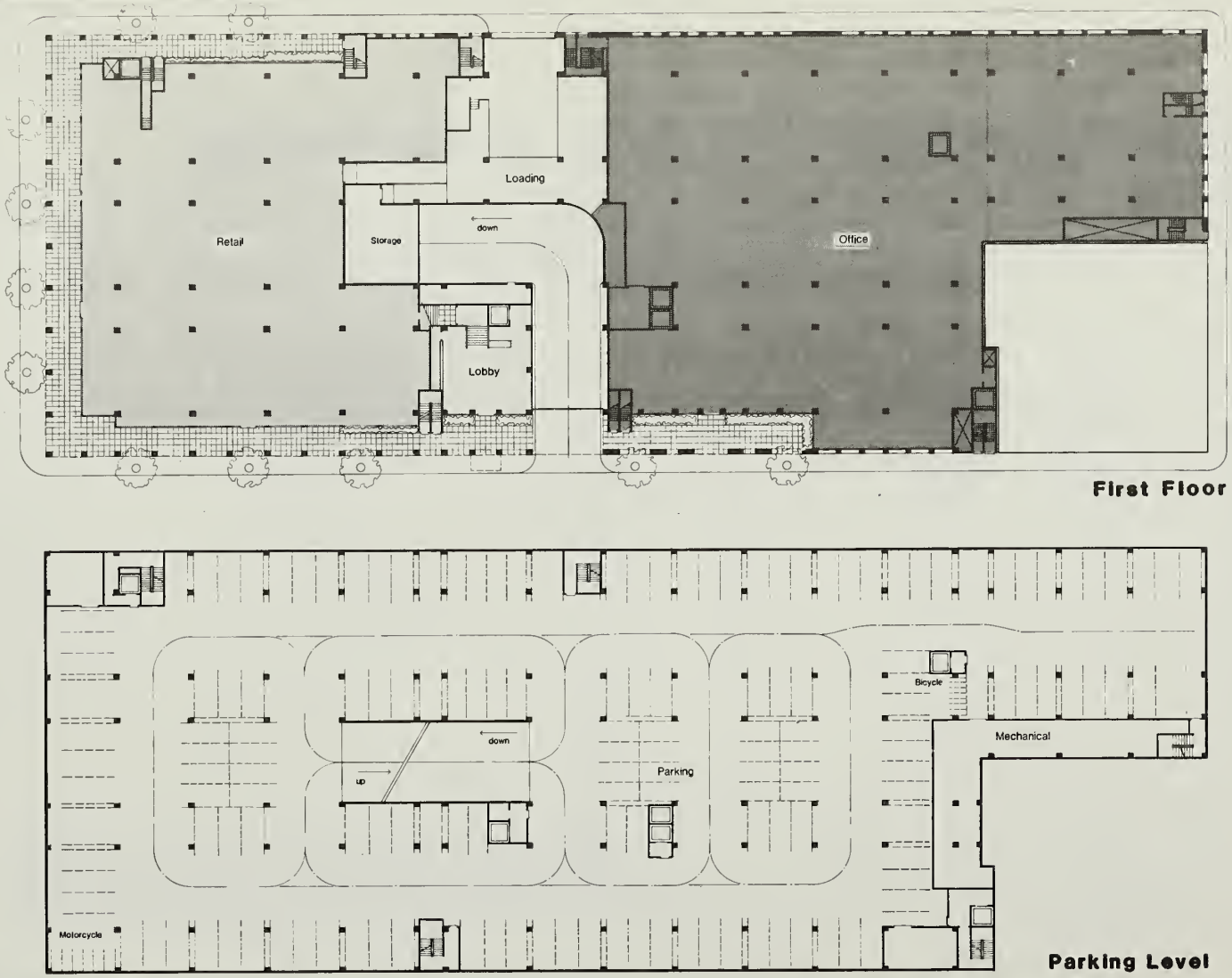


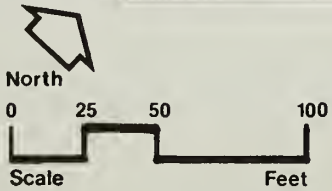
Alternative 5: Section (Faceing South)

0 25 50 100
Scale Feet

Figure No. 49

Source: Tai Associates

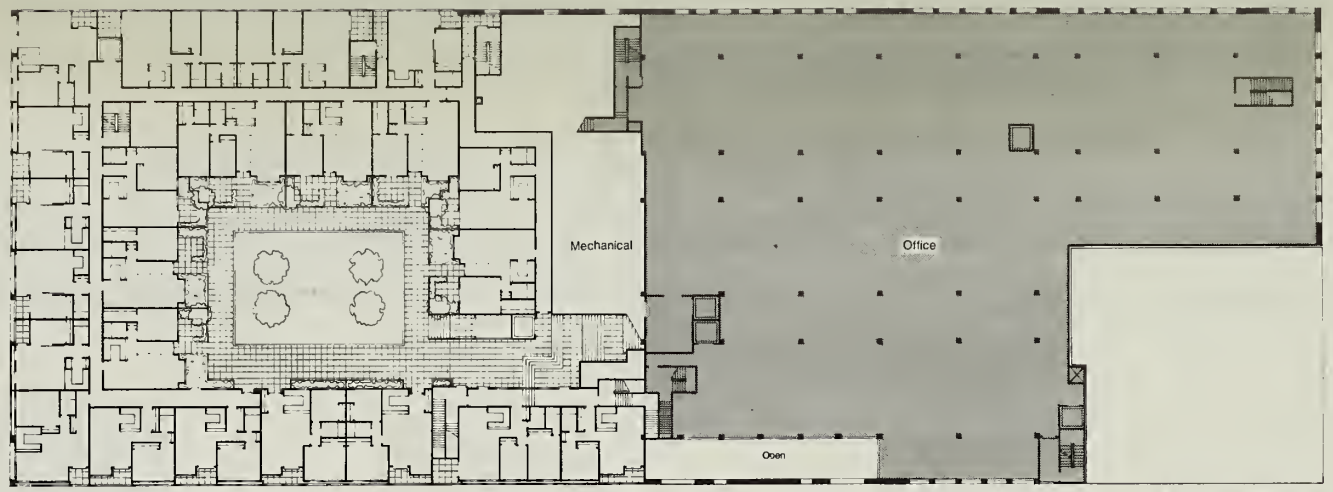




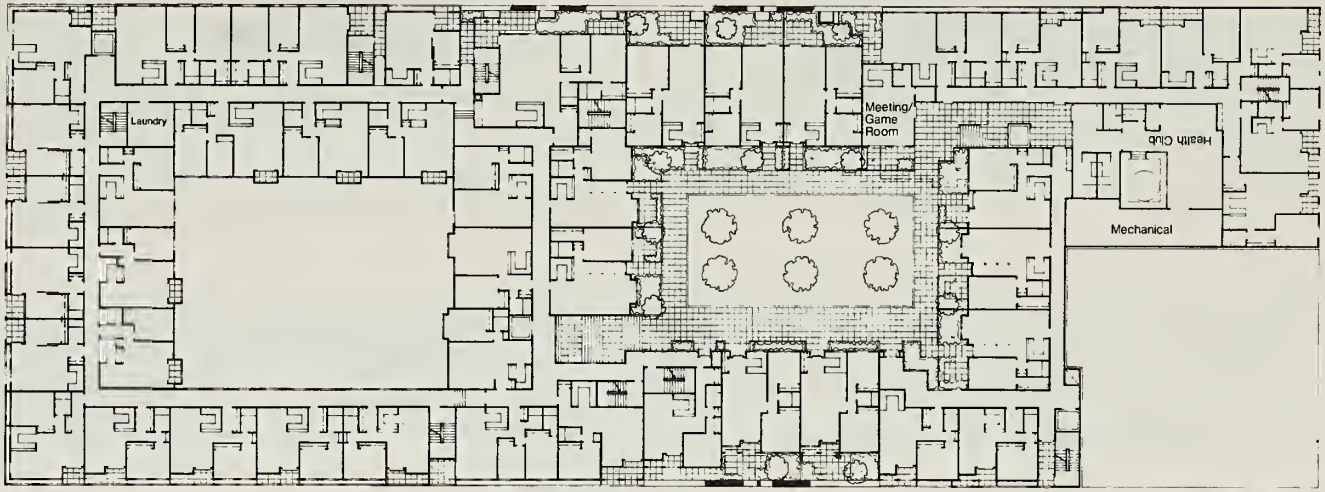
Alternative 5: Parking Level First Floor

Figure No. 50

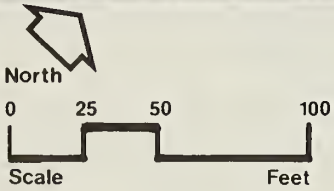
Source: Tai Associates



Second Floor



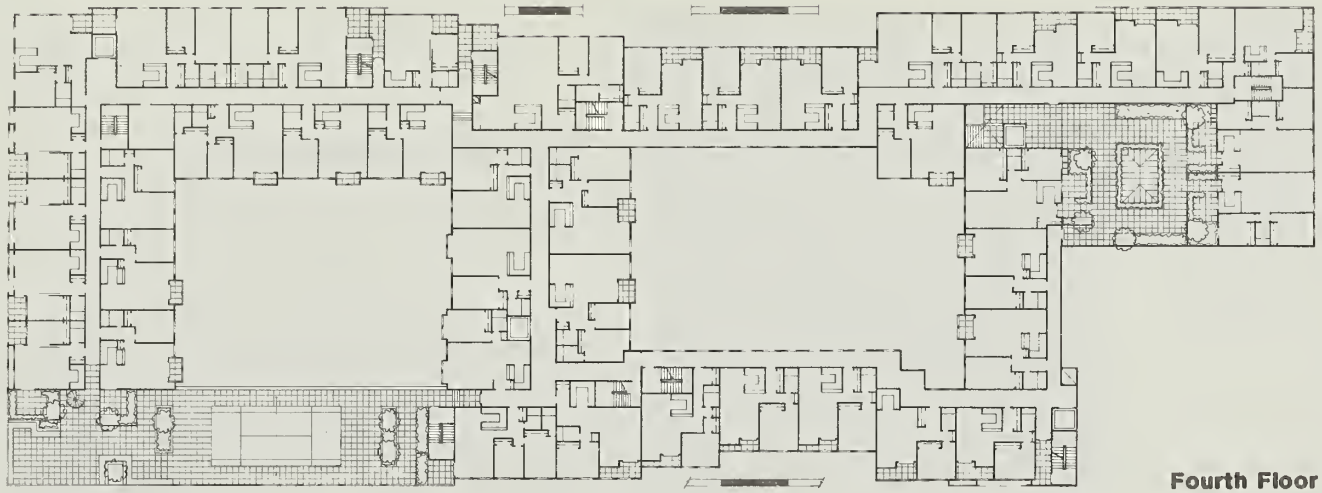
Third Floor



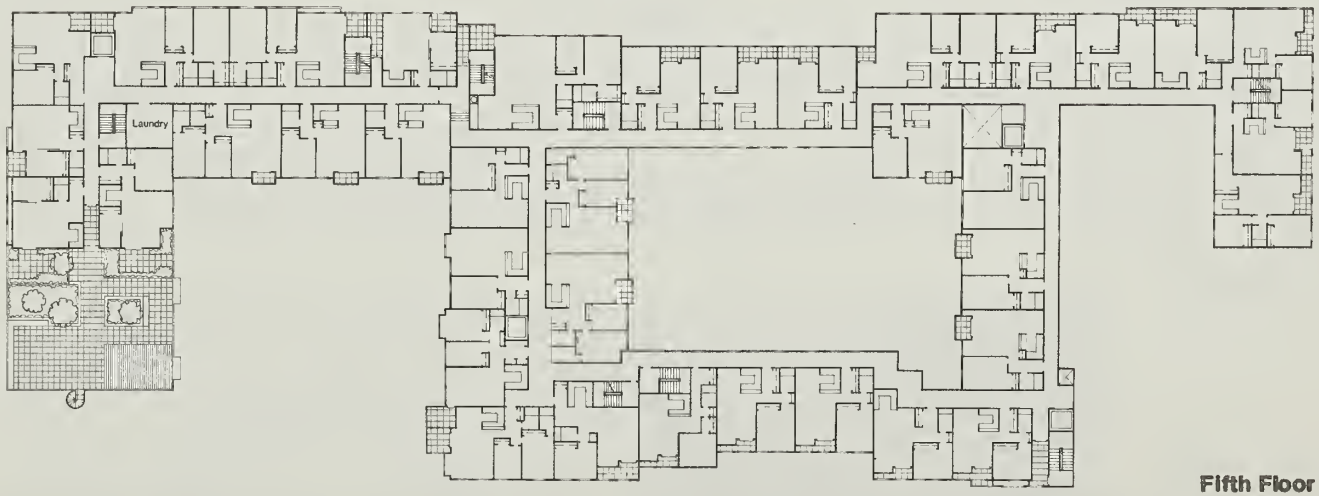
Alternative 5: Second Floor Plan
Third Floor Plan

Figure No.51

Source: Tai Associates



Fourth Floor



Fifth Floor

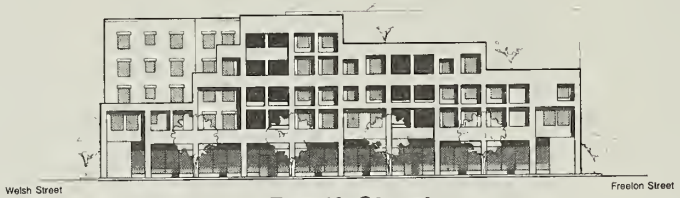
Alternative 5: Fourth Floor Plan
Fifth Floor Plan

Figure No. 52

Source: Tai Associates

Freelon Street

Zoe Street



Fourth Street

Welsh Street

Alternative 5: Street Elevations

0 25 50 100

Scale Feet

Figure No. 53

Source: Tai Associates

represent less than 1% of all trips generated by cumulative downtown development. Because the project trips could represent a small percentage of the total trips generated by cumulative development, the alternative would not in itself result in substantially increased transportation impacts.

The projected intersection service levels (Table 9, page 67) would not change. Pedestrian flow conditions would also be unaffected. The alternative would generate an additional 38 Muni trips during the p.m. peak hour. When apportioned among the various lines serving the project site, the 1983 patronage (with project) listed on Table 11, page 72 would increase by less than 0.6%. Projected 1983 load factors would not be measurably changed. Similarly, the increased patronage in other transit carriers would not result in measurable changes in the load factors discussed in the EIR.

Based upon the San Francisco Planning Code, the alternative's parking requirements would be:

146 dwelling units @1 space/unit	=	146 spaces
57,000 sq. ft. office @2 space/1000 sq. ft.	=	114 spaces
18,000 sq. ft. retail @2 spaces/1000 sq. ft.	=	36 spaces
TOTAL		296 spaces

The alternative's 298 space parking garage would meet this requirement.

Noise impacts would be similar to those of the proposed project during the construction phase; however, duration of the impact would be lessened as a result of constructing a smaller and less complex structure. Impacts on noise levels after construction is completed would not be appreciably different.

Air quality impacts would be about the same as the proposed project. Emissions from motorized equipment during construction would be less due to the size of the alternative structure. Since the alternative structure has 4 less stories than the proposed project, building shadows would be reduced and available light in open areas and interior building spaces would be increased by 40%.

Estimated energy use during construction would be the equivalent of 9,900 barrels of oil. The estimated construction costs would be about $6 to 8 million less than the proposed project (about $22 to 24 million). Gas and electrical consumption would be reduced proportionately to the 10% reduction in square footage of floor space compared to the proposed project.

This alternative could generate about 286 permanent jobs which would be an increase of approximately 86 more than the proposed project. The type and number of position created are shown below.

57,000 sq. ft. commercial office @ 1 employee/250 square feet	= 228
18,000 sq. ft. retail @ 1 employee/350 sq. ft.	= 51
(76,000 combined) @ 1 janitorial/maintenance employee/ 12,000 sq. ft.	= 7
TOTAL	= 286

The 57,000 office/office support jobs could create a demand for 51 housing units (applying the City's formula of 250 square feet per office/office support employee x 40% living in San Francisco - 1.8 employees per household for downtown office space). The 146 residential units provided in this alternative would meet this demand and add an additional 95 units to the City's housing stock.

The net increase over existing composite property tax revenues to San Francisco would be reduced from the proposed project by about 10%. The increased employment generation would increase payroll taxes by more than 30%. Public service costs for this alternative would be about the same as the proposed project.

The project sponsor rejected this alternative because it doesn't provide the full range of residential units and the mixed uses as the proposed project. Moreover, the residential units could be more marketable with views above 50 feet.

X. EIR AUTHORS AND PERSONS CONSULTED

A. PROPOSED PROJECT AND EIR

Author of Environmental Impact Report

San Francisco Department of City Planning
45 Hyde Street
San Francisco, California 94102
Assistant Environmental Review Officer: Barbara Sahm
Environmental Review Coordinator: Diane Oshima
Environmental Planner: Gail Bloom

Author of Preliminary Draft Environmental Impact Report

Environmental Impact Planning Corporation
319 Eleventh Street
San Francisco, California 94103
Project Manager: Stuart During
With: Charles M. Salter Associates, Consultants in Acoustics

Project Sponsor

Jon Corporation N.V.
592 Vallejo Street, #1
San Francisco, California 94133

Project Architect

Tai Associates Architects
445 Bush Street
San Francisco, California 94108
(415) 433-2050
Carl Kinczel

XI. DISTRIBUTION LIST

STATE AGENCIES

State Office of Intergovernmental Management (10)
State Clearinghouse
1400 - Tenth Street
Sacramento, California 95814

REGIONAL AGENCIES

Association of Bay Area Governments
Hotel Claremont
Berkeley, California 94705

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109
Attention: Irwin Mussen

Bay Area Rapid Transit District
800 Madison Street
Oakland, California 94607
Attn: John Stamas, Ward Belding

California Archaeological Site Survey
Cabrillo College
6500 Soquel Drive
Aptos, CA 95003
Attention: Arlyn Golder

Golden Gate Bridge Highway & Transportation District
P.O. Box 9000, Presidio Station
San Francisco, California
Attn: Alan Zahradnik, Peter Dyson

Metropolitan Transportation Commission
Hotel Claremont
Berkeley, California 94705

San Mateo County Transit District
400 South El Camino
San Mateo, California 94402
Attn: Larry Stueck

Alameda-Contra Costa Transit District
508 - 16th Street
Oakland, CA 94612
Attn: Gene Gardner

Caltrans
130 Oak Street
San Francisco, CA 94102
Attn: Leonard Newman

CITY AND COUNTY OF SAN FRANCISCO

San Francisco Planning Commission
100 Larkin Street
San Francisco, California 94102
Toby Rosenblatt, President
Susan Bierman
Roger Boas
Norman Karasick, Alternate
Jerome Klein
Yoshio Nakashima
Richard Sklar
Eugene Kelleher, Alternate
C. Mackey Salazar
Lee Woods, Secretary

San Francisco Department of City Planning
100 Larkin Street
San Francisco, CA 94102
Lu Blazej
Joan Carson
Gail Bloom
Richard Hedman
Dick Reeves
Eva Levine
Barbara Sahm
Diane Oshima

Bureau of Building Inspection
450 McAllister Street
San Francisco, California 94102
Attention: Robert Levy, Superintendent

CITY AND COUNTY OF SAN FRANCISCO
(continued)

Water Department
Distribution Division
425 Mason Street
San Francisco, California 94102
Attention: John Kenck, Manager

San Francisco Fire Department
260 Golden Gate Avenue
San Francisco, California 94102
Attention: Assistant Chief
Joseph Sullivan, Division of Planning and Research

San Francisco Municipal Railway
942 Presidio Avenue
San Francisco, CA 94115
Attention: Susan Chelone

San Francisco Department of Public Works
Traffic Engineering Division
460 McAllister Street
San Francisco, CA 94102
Attn: Nelson Wong

San Francisco Department of Public Works
Mechanical Section
45 Hyde Street, #222
San Francisco, CA 94102
Attn: Ray Daneby

Economic Development Council
552 McAllister Street
San Francisco, CA 94102
Attn: Richard Goblirsch
Harvey Kroll

San Francisco Police Department
850 Bryant Street
San Francisco, California 94103
Attn: Paul Libert, Officer, Planning and Research

San Francisco Public Utilities Commission
Bureau of Energy Conservation
949 Presidio Avenue, Room 111
San Francisco, CA 94115
Attn: Flint Nelson, Director

MEDIA

KBHK - Channel 44
420 Taylor Street
San Francisco, California 94108
Attention: Juana Samayoa

KCBS, News Radio
One Embarcadero Center
San Francisco, California 94115

KGO, Channel 7 (News)
277 Golden Gate Avenue
San Francisco, California 94102
Attention: Joyce Shank

KPIX, Channel 5 (News)
2655 Van Ness Avenue
San Francisco, California 94123

KRON, Channel 4 (News)
1001 Van Ness Avenue
San Francisco, California 94123

KQED Television Studio
500 - Eighth Street
San Francisco, California 94103

San Francisco Bay Guardian
27000 - Nineteenth Street
San Francisco, California 94110
Attention: Patrick Douglas

San Francisco Chronicle (2)
925 Mission Street
San Francisco, California 94103
Attention: Marshall Kilduff

San Francisco Examiner
110 - Fifth Street
San Francisco, California 94103
Attention: Gerald Adams

San Francisco Progress
851 Howard Street
San Francisco, California 94103
Attention: Mike Mewhinney

The Sun Reporter
1366 Turk Street
San Francisco, CA 94115

LIBRARIES

Documents Department
City Library - Civic Center
San Francisco, California 94102
Attention: Faith Van Liere

Environmental Protection
Agency Library
215 Fremont Street
San Francisco, California 94105
Attention: Jean Circiello

Government Documents Section
Stanford University
Stanford, California 94305

Government Publications Department
San Francisco State University
1630 Holloway Avenue
San Francisco, California 94132

Hastings College of the Law Library
198 McAllister Street
San Francisco, California 94102

Institute of Governmental Studies
1209 Moses Hall
University of California
Berkeley, CA 94720

GROUPS & INDIVIDUALS

AIA
Northern California Chapter
790 Market Street
San Francisco, California 94102

Building Owners and Managers
Association
68 Post Street
San Francisco, California 94104

Joseph Coriz
2853 - 22nd Street
San Francisco, CA 94110

Downtown Senior Social
295 Eddy Street
San Francisco, California 94102

Downtown Association
582 Market Street
San Francisco, California 94104
Attention: Lloyd Pflueger, Manager

GROUPS & INDIVIDUALS (cont'd)

Environmental Science Associates
1291 E. Hillsdale Boulevard
Foster City, California 94404

Friends of the Earth
124 Spear Street
San Francisco, California 94105
Attention: Connie Parrish

Gray Panthers
944 Market Street
San Francisco, California 94102
Attention: W. Nunnally
League of Women Voters
12 Geary Street, Room 605
San Francisco, California 94108

Legal Assistance to the Elderly
944 Market Street, #803
San Francisco, California 94102

San Francisco Building & Construction
Trades Council
400 Alabama Street, Room 100
San Francisco, CA 94110
Attention: Stanley Smith

San Francisco Chamber of Commerce
456 Montgomery Street
San Francisco, California 94102
Attention: Richard Morten

San Francisco Ecology Center
13 Columbus Avenue
San Francisco, California 94111

San Francisco Forward
640 Market Street
San Francisco, California 94104

San Francisco Planning and Urban
Research Association
312 Sutter Street
San Francisco, California 94102
Attention: Mike McGill
Acting Executive Director

San Francisco Tomorrow
728 Montgomery Street, #34
San Francisco, California 94111
Attention: Suzanne Smith

GROUPS & INDIVIDUALS (cont'd)

San Franciscans for Reasonable Growth
9 First Street
San Francisco, California 94105
Attention: Carl Imparato

San Francisco Women's Chamber
of Commerce
1963 - 22nd Avenue
San Francisco, California 94122

Senior Escort Program
South of Market Branch
814 Mission Street
San Francisco, California 94103
Attention: Leslie Halford
Neighborhood Coordinator

Sierra Club
530 Bush Street
San Francisco, California 94108
Attention: Becky Evans

John Sanger Associates
2340 Market Street
San Francisco, California 94114

Timothy Tosta
333 Market Street, Suite 2230
San Francisco, California 94105

TODCO
177 Jessie Street
San Francisco, California 94105
Attn: John Elberling

Sue Hestor
4536 - 20th Street
San Francisco, California 94114

San Francisco Convention and
Visitors Bureau
1390 Market Street, Suite 260
San Francisco, CA 94102
Attn:George D. Kirkland,

San Francisco Beautiful
41 Sutter Street
San Francisco, CA 94104
Attn: H. Klussman,

Building Service Employees Union
240 Golden Gate Avenue
San Francisco, CA 94102

GROUPS AND INDIVIDUALS
(continued)

Junior Chamber of Commerce
251 Kearny Street
San Francisco, CA 94108

South of Market Association
1173 Mission Street
San Francisco, CA 94103
Attn: Lee Meyerzove

Market Street Development
Project
1355 Market Street, #458-B
San Francisco, CA 94103

Tai Associates/Architect
445 Bush Street
San Francisco, CA 94103
Attn: Carl Kinczel

San Francisco Labor Council
3058 - 16th Street
San Francisco, CA 94103
Attn: Bernard Speckman

Canon Kip Community House
705 Natoma street
San Francisco, CA 94103
Attn: Eugene Coleman

Economic Opportunity Council
1173 Mission Street
San Francisco, CA 94103

Jeremy Kotas
c/o Zoe Works
#70 Zoe Street
San Francisco, CA 94107

Standard Mechanical
87 Welsh Street
San Francisco, CA 94102
Attn: Hans Mulhauser

Wayne Stiefrater
Appraisal Consultants
701 Sutter Street
2nd Floor
San Francisco, CA 94107

GROUPS AND INDIVIDUALS
(continued)

Recht Hausrath & Associates
155 Bovet Road, Suite 303
San Mateo, CA 94402

Charles & Braun,
Consulting Engineers
121 Second Street
San Francisco, CA 94150

PROPERTY OWNERS

Dora W. Day
500 Katherine Avenue
San Francisco, CA 94062

Chung Kee Jan Co., Inc.
538 Grant Avenue
San Francisco, CA 94108

Ron and Ann Martin
131 Lake Merced Hill Blvd.
San Francisco, CA 94132

Franklin Machine Works, Inc.
264 Mallorca Way
San Francisco, CA 94123

Charles and Helen Jones
49 Zoe Street
San Francisco, CA 94107

Michael Strunsky
c/o Apersey Construction
P. O. Box 77923
San Francisco, CA 94107

Ruth L. Conrad
34 Acron Way
Kentfield, CA 94904

Edward Keil
244 Kearny Street
San Francisco, CA 94108

PROPERTY OWNERS
(continued)

Jung & In Ja Wang
50 San Leandro Way
San Francisco, CA 94127

Williams Lithograph Co.
534 - 4th Street
San Francisco, CA 94107

Alice Collins
1401 Douglass Street
San Francisco, CA 94131

Lester & Jean Howe
646 - 27th Avenue
San Francisco, CA 94121

Garth Collier
70 Zoe Street
San Francisco, CA 94107

Jon Corporation N.V.
592 Vallejo Street, #1
San Francisco, CA

Transamerica Title Ins. Co.
N/O Schwartz Ida .70
Schwartz Ida
601 Teresita Boulevard
San Francisco, CA 94127

Henry Fourcade
137 Marina Boulevard
San Francisco, CA 94123

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APPENDIX A

FINAL INITIAL STUDY

WELSH COMMONS

FOURTH STREET BETWEEN WELSH AND

FREELON STREETS

SAN FRANCISCO, CALIFORNIA

81.59 E

30 October, 1981

Prepared by:

ENVIRONMENTAL IMPACT PLANNING CORPORATION
319 11th Street
San Francisco, California 94103
(415) 864-2311

SAN FRANCISCO
DEPARTMENT OF CITY PLANNING 100 LARKIN STREET · SAN FRANCISCO, CALIFORNIA 94102
(415) 552-1134

NOTICE THAT AN ENVIRONMENTAL IMPACT REPORT IS DETERMINED TO BE REQUIRED

Date of this Notice: October 30, 1981

Lead Agency: City and County of San Francisco, Department of City Planning
100 Larkin Street, San Francisco, CA. 94102

Agency Contact Person: Diane Oshima Tel: (415) 552-1134

Project Title: EE81.59: Welsh Commons

Project Sponsor: Vincent Tai
Tai Associates

Project Contact Person: Carl Kinczel

Project Address: Fourth Street, between Welsh and Freelon Streets

Assessor's Block(s) and Lot(s): Lot 119 in Assessor's Block 3776

City and County: San Francisco

Project Description: New construction of mixed-use development consisting of two main components at a maximum height of 11 stories, containing office support (55,600 sq. ft.), retail space (12,000 sq. ft.), light industrial space (19,000 sq. ft.), and 160 residentail units (148,000 sq. ft.), providing 265 off-street parking spaces, requiring demolition of five existing wood, concrete and metal warehouses.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15081 (Determining Significant Effect), 15082 (Mandatory Findings of Significance) and 15084 (Decision to Prepare an EIR), and the following reasons, as documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

Deadline for Filing of an Appeal of this Determination to the City Planning Commission: November 9, 1981.

An appeal requires 1) a letter specifying the grounds for the appeal, and 2) a $35.00 filing fee.

cc: Project Distribution List
Robert Passmore
Joe Fitzpatrick
100 Larkin Bulletin Board
Tai Associates

Alec S. Bash

Alec S. Bash, Environmental Review Officer

ER5 6/80

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PROJECT DESCRIPTION

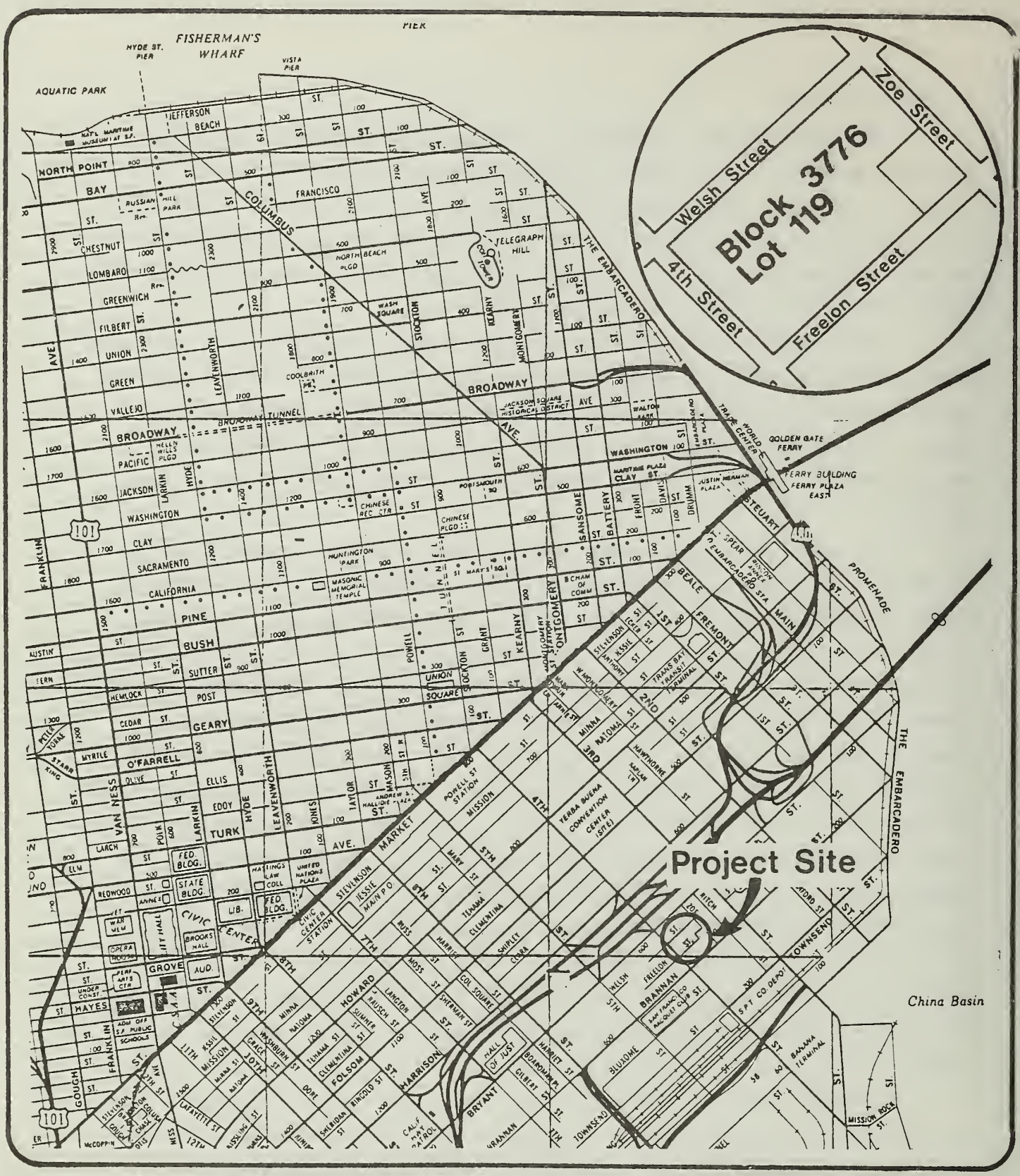
The proposed Welsh Commons is a mixed-use development containing condominium units, office space, industrial/commercial space, service retail space and parking. The project site is located in the South of Market area of San Francisco on 4th Street in the block bounded by Zoe, Freelon and Welsh Streets (Figures 1, 2 and 3). The entire project site is Lot 119 in Assessor's Block 3776, which is about 63,000 square feet.

The proposed site currently contains 2 vacant warehouses, a corrugated metal structure used as a sheet metal shop, and a vacant reinforced concrete service/industrial building. The northeast corner of the parcel is open space surrounded by a chain-link fence. There would be no relocation of businesses from the site. Three workers would be displaced by the proposed project.

The proposed project would contain 408,000 square feet (Figures 4, 5 and 6). Approximately 148,000 square feet would contain 160 condominium units (19 studios, 104 one-bedroom, and 37 two-bedroom units). These units would be designed to sell in the range of $90,000 to $180,000 (1981 dollars). Sixteen units would be available for low-income housing. Approximately 55,600 square feet would be planned for office support/service/wholesale space. About 12,000 square feet of service/retail and 19,000 square feet of service/industrial space are planned at ground level. The office support space would be located on ground, 2nd and 3rd floors in mid-block. The condominium structures would be 11 stories including 2 levels of parking below ground. The condominium units would be located around a central court on the 2nd and 3rd levels with 3 stepped towers to the north and east with partial space for industrial/commercial components of the project on the first 2 levels. There would be 265 spaces available for parking in the project. The project is designed to provide approximately 54,000 square feet of terraces and open spaces for both private and public use.

Certain building components would be oriented on a north-south axis to maximize potential for solar energy. Solar collectors would be built into the structures to provide hot water for all residential units.

The commercial/retail space would be designed to accommodate neighborhood-oriented services and there would be 3 shared loading docks available on the ground level on Welsh Street.



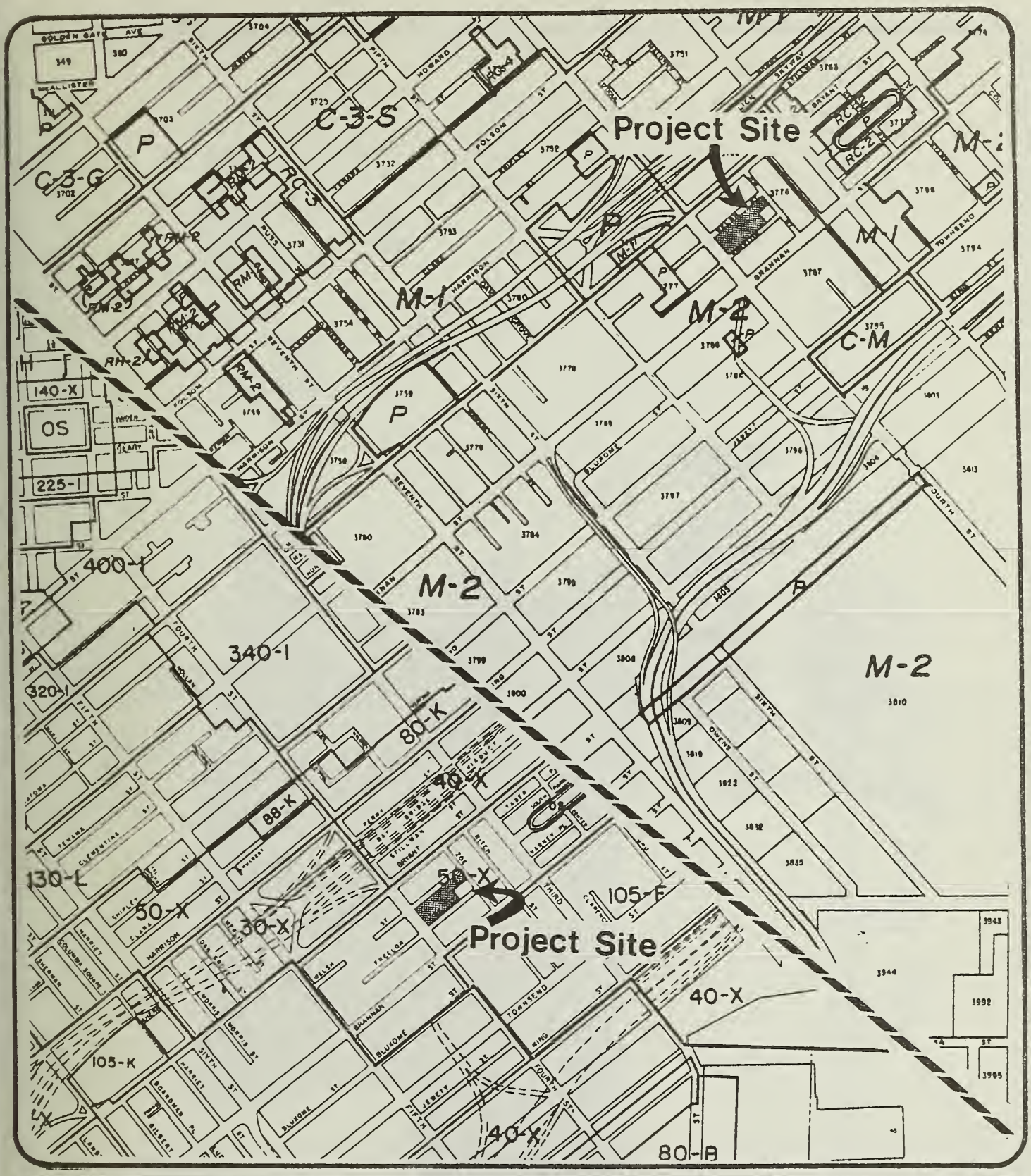
Site Location Map

North

0 500 1000 2000

Scale Feet

Figure No. 1



Existing Zoning/Height and Bulk Districts

North

0 400 800 1600

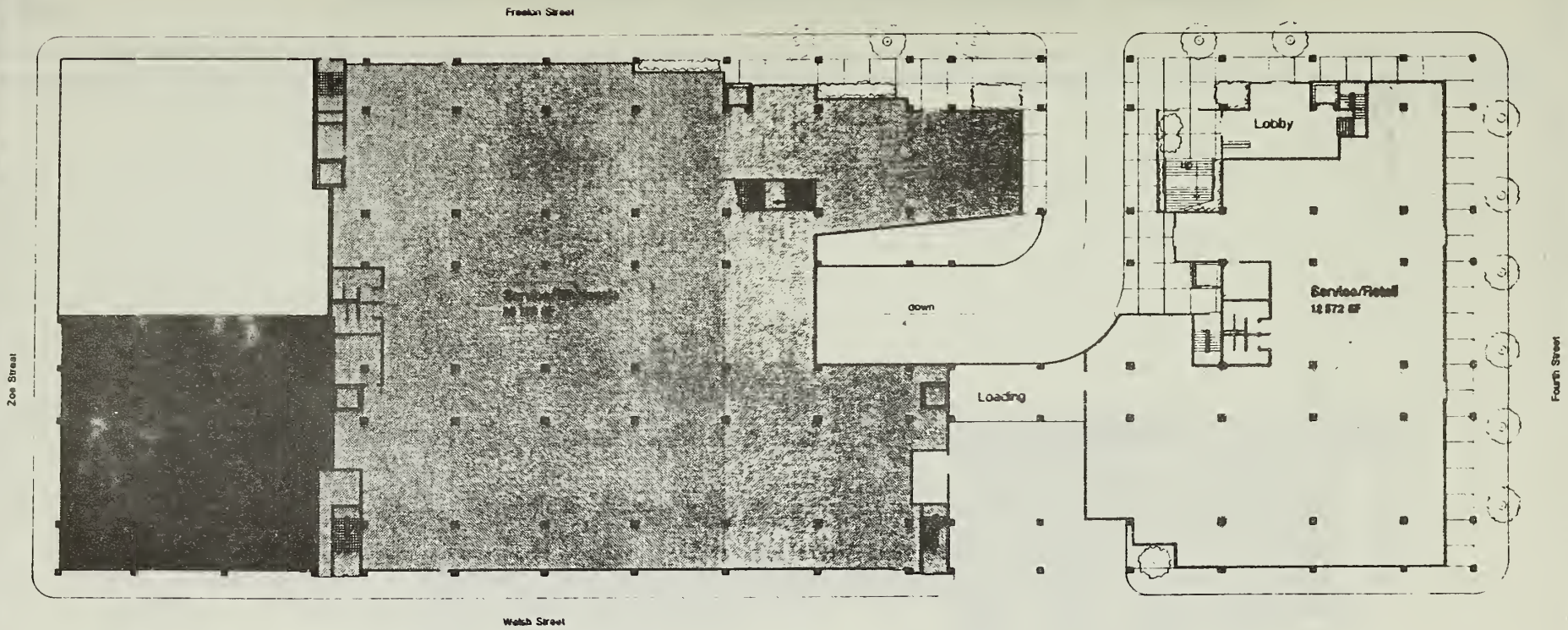
Scale Feet

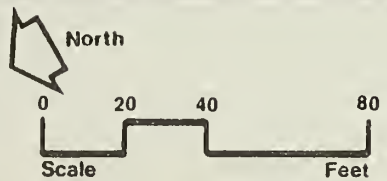
Figure No. 2

Rendering of Project: looking east, corner of Freelon and Fourth Streets

Source: Tai Associates

Figure No. 3

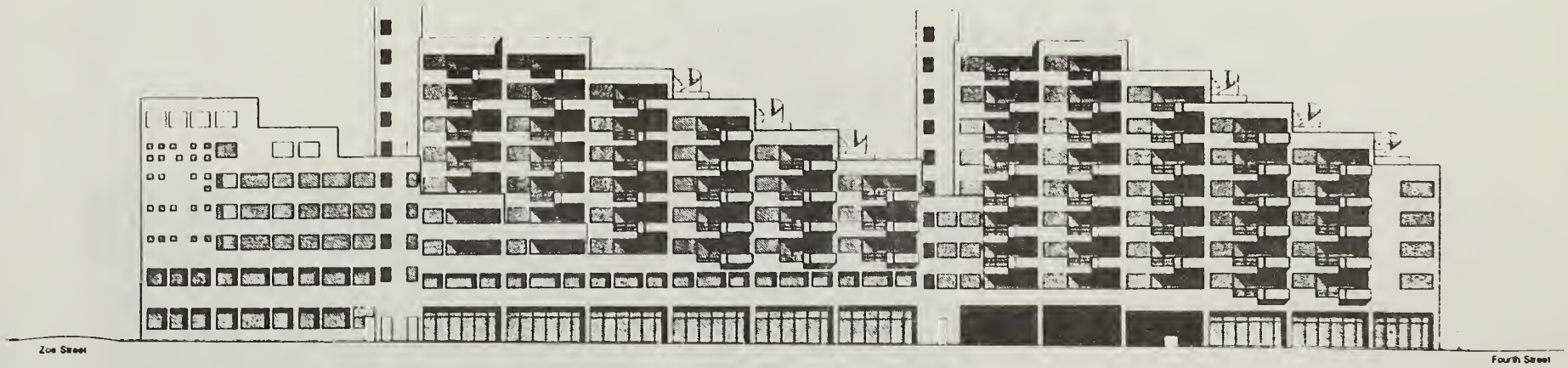


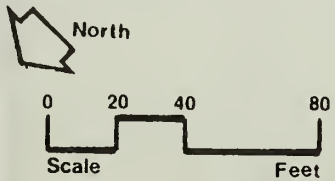


First Floor Plan

Figure No. 4

Source: Tai Associates

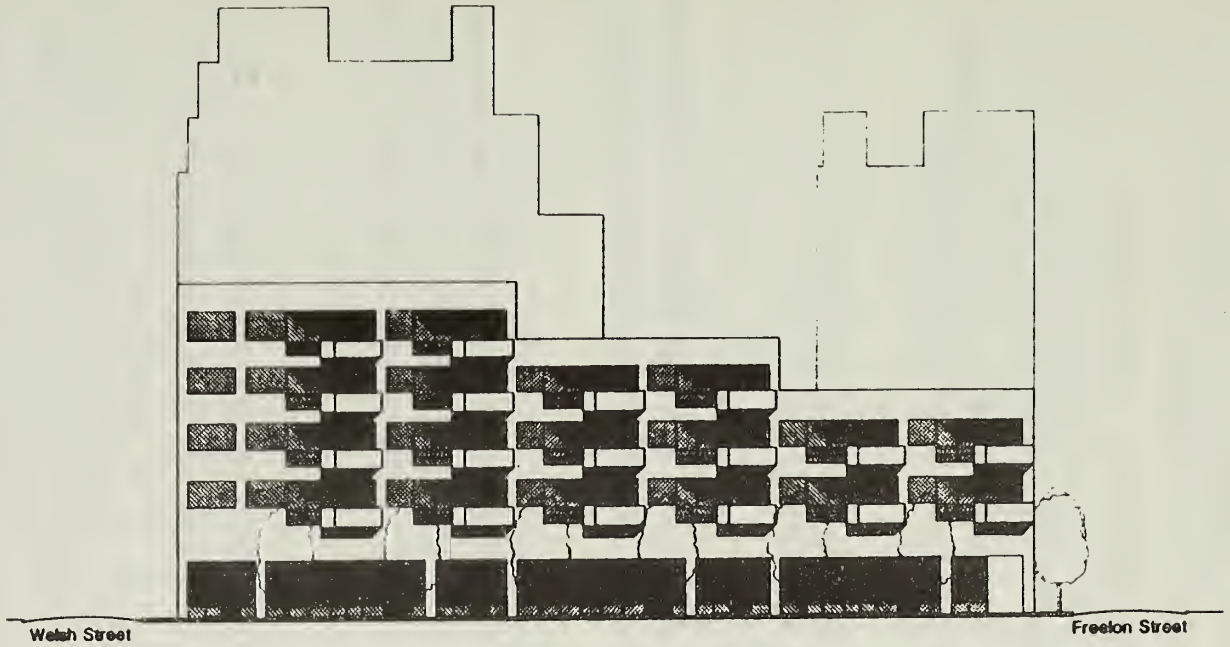


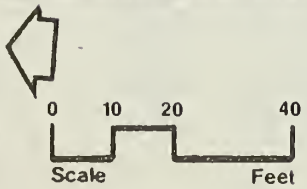


Welsh Street Elevation (facing south)

Figure No. 5

Source: Tai Associates





Fourth Street Elevation (facing east)

Figure No. 6

Source: Tai Associates

POTENTIAL ENVIRONMENTAL EFFECTS

The potential environmental effects that would result from the proposed project include a change in land use on the site, increase of population (residential and employment), effects on long-range views, circulation requirements and effects on existing vehicular and transit systems, noise impacts of piledriving during construction, cumulative air quality impacts, effects of shadows, and energy demand aspects. These issues will be covered further in the subsequent focused EIR.

The potential environmental issues of the proposed Welsh Commons that have been determined to be insignificant, and therefore will not be addressed in the EIR for the project, are indicated below:

Biology: The proposed project would have no effect on plant or animal life on the project site or the surrounding area.

Public services and utilities: The increased demand for public services and utilities generated by the proposed project would not require additional personnel or equipment.

Cultural: There is no known archaeological resource potential on the site. If any artifact, structural remnant, or other type of archaeological resource were found during excavation, mitigation measures included in the report would be implemented.

Hazards: The proposed project would not be affected by hazardous uses or health hazards in the area nor would there be a potential for health hazards.

Noise: After project completion, audible noise levels in the project vicinity would not increase. Noise insulation features would be included in the project design to comply with standards of Title 25 of the California Administrative Code.

Topography/Soils Geology. The proposed Welsh Commons project is not expected to have an effect on the site's topography, soils or geology.

A. GENERAL CONSIDERATIONS:	Yes	Maybe	No	N/A	Disc.
1. Would the project conflict with objectives and policies in the Comprehensive Plan (Master Plan) of the City?		X			X
2. Would the project require a variance, or other special authorization under the City Planning Code?	X				X
3. Would the project require approval of permits from City Departments other than DCP or BBI, or from Regional, State or Federal Agencies?			X		X
4. Would the project conflict with adopted environmental plans and goals?		X			X

The proposed Welsh Commons project would comply with most major provisions of the San Francisco City and County Comprehensive Plan. It would provide needed housing space as well as meeting the demand for increased office support space. The project is representative of new mixed-use development in the South of Market area that responds to the increased growth pressures for housing, office support and industrial/commercial space.

The proposed development would be inconsistent with the Urban Design Element Policy 6, Objective 3 for Major New Development which indicates that new buildings should relate to the prevailing scale of development. The proposed project would be twice the height of the existing zoning (105 feet vs. 50 feet).

The project would require conditional use authorization for a Planned Unit Development under the provisions of Sections 303 and 304 of the City Planning Code. Pursuant to Section 304 of the San Francisco Planning Code, a development must meet certain criteria before a Conditional Use Permit for a Planned Unit Development may be granted. The Planned Unit Development would provide housing, parking, usable open space and office support, commercial/retail and industrial uses. Planned Unit Development status allows adjustments to the Planning Code Requirements if the proposed project provides various features in conformance with the Master Plan Policies. The Conditional Use Application would be the subject of a public hearing before the City Planning Commission, after certification of the Final EIR.

Prior to the sale of the condominium units, it would be necessary for the project sponsor to obtain approval of an application to subdivide the property pursuant to Section 1303(c) of the Subdivision Code, Chapter XIII of Part II of the San Francisco Municipal Code. Such an application must be filed with the Department of Public Works, which refers it to the Department of City Planning, the Bureau of Engineering, the Bureau of Building Inspection, and the Human Rights Commission. In the case of the City Planning Commission, the public hearing to consider consistency with the master plan would be necessary (Section 1332 of the Subdivision Code). This application would be considered at the same time as the Conditional Use Application. Subdivisions of 50 units or more require provision of a minimum of 10 % low and moderate-income housing. The proposed Welsh Commons would have 16 units designated for this category.

The area for the proposed project is zoned M-2 (heavy industrial) with a height limit of 50 feet. A zoning reclassification would be required to accommodate the height to 105 feet. The housing density for 160 units would be about 1 unit per 403 square feet (slightly more than in an RM-3 or RC-3 District).

B. ENVIRONMENTAL IMPACTS:	Yes	Maybe	No	N/A	Disc.
1. Land Use. Would the proposed projects:					
a. Be different from surrounding land uses?	X				X
b. Disrupt or divide the physical arrangement of an established community?		X			X

The project site is located in the largely industrial section in the South of Market area. The site formerly was used for warehouses, a sheet metal shop and furnace installing and cleaning operation. The surrounding land uses are light industrial with some artists' studios in lofts on Welsh and Zoe Streets. On the southwest corner of 4th and Bryant is a hotel and on the northwest corner of Brannan and 4th is a restaurant which caters to a citywide clientele. A parking lot for United California Bank is to the south of the proposed project site on Freelon Street.

2. Visual Quality and Urban Design. Would the proposed project:	Yes	Maybe	No	N/A	Disc.
a. Obstruct or degrade any scenic view or vista open to the public?		X			X
b. Reduce or obstruct views from adjacent or nearby buildings?	X				X
c. Create a negative aesthetic effect?		X			X
d. Generate light or glare affecting other properties?		X			X

The proposed project could alter some scenic views or vistas now available to the public. The project would be visible from Highways 80 and 280 north and south of the project site. The 9-story structures designed for the project site would block views from buildings on Welsh Street to the south and possibly cast shadows on Welsh Street structures. Buildings on Zoe and Freelon Streets would have their views blocked to the west and north, respectively.

The proposed Welsh Commons Complex would provide an aesthetic change from a 1- to 2-story industrial use to a terraced residential office development in light neutral tones, with landscaping on the ground floor plaza and the various terraces facing Welsh, Freelon and 4th Streets. Light would be noticeable from the proposed project, but this could be tempered by the glass tint, landscaping on the terraces, and interior design features such as curtains and drapes. Further study of the views of the project from various sites surrounding the project would be included in the EIR.

3. Population/Employment/Housing: Would the proposed project:	Yes	Maybe	No	N/A	Disc.
a. Alter the density of the area population?	X				X
b. Have a growth-inducing effect?	X				X
c. Require relocation of housing or businesses, with a displacement of people, in order to clear the site?			X		X
d. Create or eliminate jobs during construction and operation and maintenance of the project?	X				X
e. Create an additional demand for housing in San Francisco?			X		X

The proposed project would displace 2 employees from the site. Approximately 555 person-years of construction employment would be created by the full development of the project. About 198 jobs would be created by the project in the office support and commercial/retail spaces, including maintenance and management of the residential units.

A project of this magnitude is likely to have a growth-inducing effect on other residential and mixed-use development in the South of Market area. The demand for housing generated by the office and industrial/commercial/retail space of the project would be met by the proposed 160 residential units planned as part of the project.

4. Transportation/Circulation. Would the construction or operation of the project result in:	Yes	Maybe	No	N/A	Disc.
a. Change in use of existing transportation systems? (transit, roadways, pdestrian ways, etc.)	X				X
b. An increase in traffic which is substantial in relation to existing loads and street capacity?	X				X
c. Effects on existing parking facilities, or demand for new parking?	X				X
d. Alteration to current patterns of circulation or movement of people and/or goods?		X			X
e. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?		X			X
f. A need for maintenance or improvement or change in configuration of existing public roads or facilities?		X			X
g. Construction of new public roads?			X		X

The proposed project would generate an increase in MUNI and regional transportation as well as additional vehicle trips to and from the project site. The circulation patterns for automobiles and pedestrians may be affected by the proposed project and there may be additional volumes on Welsh, Zoe and Freelon Streets. The proposed project would have 265 parking spaces for vehicles in 2 levels of parking. The project-related and cumulative impacts for transportation will be given further consideration.

5. Noise					
a. Would the proposed project result in generation of noise levels in excess of those currently existing in the area?	X				X
b. Would existing noise levels impact the proposed use?		X			X
c. Are Title 25 Noise Insulation Standards applicable?	X				X

Noise levels in excess of those currently in the area would not result from the full implementation of the project. The amount of traffic generated by the project during any hour of the day could cause traffic noise levels to be increased by less than 1 dBA.[1] A dBA increase in environmental noise is undetectable by the untrained human ear.

A 2-level parking garage, primarily for the proposed residential units and office support space, is planned for the project. Such a facility would generate additional traffic, but increased noise levels would be inaudible due to existing levels on 4th, Welsh, Zoe, and Freelon Streets.[2]

Project-generated noise levels would be limited to construction noise and, upon completion of the project, noise generated by mechanical equipment associated with the building. The City Noise Ordinance requires that noise from mechanical equipment not exceed 60 dBA at the property line. To meet this requirement, all mechanical equipment for the proposed project would be enclosed and insulated, either in the central core or on upper-level mechanical floors.

The environmental protection element of the San Francisco Comprehensive Plan contains guidelines for determining compatibility of various land uses within various noise environments. The guidelines generally require an analysis of noise reduction requirements and inclusion of noise insulation features in the design of the building. The project sponsors have agreed to have an analysis done and would include recommended noise insulation feasures in the final building design; therefore no further analysis is needed in the EIR. Project construction would require approximately 1 year and would involve demolition of some buildings, excavation, and construction of the proposed structure. During construction, these activities would temporarily result in noise levels in excess of those existing in the site vicinity. As the proposed project is underlain by Bay Mud, it is likely that foundation piledriving

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[1] dBA is the measurement of sound units of decibels (dB). The "A" denotes the A-weighted scale which simulates the response of the human ear to various frequencies of sound.

[2] Noise measurements were made 17 September 1981 on the four streets surrounding the proposed project. Typical maximum noise levels in the area due to truck and bus passbys reach 78-80 dBA. These measurements will be shown in the EIR.

would be required. Conventional, unmuffled and unshielded piledrivers emit noise levels of 100-110 dBA at a distance of 100 feet each time the driver strikes the pile. If the noise emissions of the piledriving were apt to be at the 100 dBA level at 100 feet, people on the streets within 1,000 feet of the project site would hear the piledriving noise if there are no noise attenuation features incorporated in the project design during construction. The San Francisco Noise Ordinance limits noise emissions from any powered construction equipment (except impact tools) at 80 dBA at a distance of 100 feet. If construction equipment and tools do not comply with the provisions of Section 2907 of the Noise Ordinance, there may be a limitation of the hours of construction when such tools and equipment are used. Additional study of this topic is needed and will be prepared for the EIR.

Title 25, Noise Insulation Standards, applies to the proposed project. The project sponsor has indicated that the proposed Welsh Commons Development would be constructed to conform with the standards. No further discussion is necessary on the EIR.

6. Air Quality/Climate. Would the proposed project result in:	Yes	Maybe	No	N/A	Disc.
a. Violation of any ambient quality standard or contribution to an existing air quality violation?		X			X
b. Exposure of sensitive receptors to air pollutants?			X		X
c. Creation of objectionable odors?			X		
d. Burning of any materials including brush, trees, or construction materials?			X		
e. Alteration of wind, moisture, or temperature (including sun shading effects), or any change in climate, either locally or regionally?	X				X

During the construction phase of the proposed project there would be short-term impacts on air quality. The completed projects may have cumulative impacts on regional air quality.

Concentrations of air pollutants are monitored by the Bay Area Air Quality Management District (BAAQMD) at 939 Ellis Street near Van Ness Avenue, about 1½ miles northwest of the proposed project site. In 1980, only 6 violations of air quality standards were monitored in San Francisco. It is likely that the short-term impact of construction would not affect the City's air quality standards.

No sensitive receptors (hospitals, convalescent homes, schools, churches, etc.) have been identified in the vicinity of the proposed project. Individually, incremental changes in air pollution due to the proposed project would be insignificant; cumulatively, development such as this could increase reported concentration and the frequency of standard violations. Cumulative air quality issues will be addressed further in the EIR.

No objectionable odors are expected to occur from construction or operation of the proposed project. The project sponsor would consult with air quality experts and engineers to ensure the elimination of any odors that might be generated by the project.

The project site is exposed to northest and west winds due to the low-rise nature of surrounding structures. Design features such as the stepped-back terraces included in the project are known to reduce ground-level wind acceleration near buildings. The potential appears low for adverse pedestrian comfort impact. Wind tunnel tests of the proposed designs do not appear justified.[1]

The project would create and cast new shadows on the surrounding street areas, particularly on portions of 4th, Freelon and Zoe Streets. Shadow effects will be discussed in the EIR.

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[1] Letter from Don Ballanti, consulting meterologist to Environmental Impact Planning Corporation, 11 August 1981. A copy of this letter is on file with the Office of Environmental Review, Department of City Planning.

7. Utilities and Public Services. Would the proposed project:	Yes	Maybe	No	N/A	Disc.
a. Have an effect upon, or result in a need for new or altered, governmental services in any of the following?			X		X
fire protection			X		X
police protection			X		X
schools			X		X
parks or other recreational facilities			X		X
maintenance of public facilities			X		
power or natural gas			X		X
communications systems			X		X
water			X		X
sewer/storm water drainage			X		X
solid waste collection and disposal			X		X

The proposed project would increase the building area of the site and the number of persons using the project area and may increase the fire hazard. The project would, however, incorporate more extensive fire protection measures than most existing buildings in the area to comply with the more stringent code standards now in effect. The project would not require more fire department personnel or equipment; water for fighting fires would be available to the project from both the domestic and high-pressure water systems within the site.[1] Response time to the site would be about 4 minutes.

The proposed Welsh Commons Complex would increase population and property on the site, thereby increasing the opportunity for crime. Appropriate mitigation measures (alarms, adequate lighting in entry ways, closed-circuit camera systems, security personnel, etc.) would be incorporated into the project. Additional personnel or equipment would not be required by the police department for the project; however, cumulative growth in the area could increase the demand for police services.[2] Cumulative growth impacts would be discussed in the EIR.

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[1]Chief Joseph Sullivan, Division of Planning and Research, San Francisco Fire Department, leter communication, 13 May 1981.

[2]Captain Robert Forni, Southern Station, San Francisco Police Department, telephone conversation, 12 May 1981.

The size and type of the proposed residential units are not expected to contain many families with school-age children. The largest units proposed are 37 two-bedroom units which could accommodate families, however, it is not anticipated that the project would generate a demand on school services. If any school-age children were to reside at the proposed project site, the San Francisco School District could absorb any additional students.[1]

There are a number of plazas, terraces, and recreational features (such as a game room, swimming pool, weight-exercise room and whirlpool) incorporated into the proposed project design, both for residents and office support/commercial employees. The project could generate demand on parks or other recreational facilities in the City and or affect the maintenance of public facilities if users of the project frequent such facilities.

There would be a net increase in the consumption of energy generated by the proposed project. PG&E does not anticipate difficulty in providing the required amount of natural gas or electricity to the project.[2] The project sponsor has indicated that the project would conform to California Energy Commission standards for residential and nonresidential buildings (Title 24, California Administrative Code).

There would be an increase in demand for communication systems generated by the proposed project. No supplier capacity problems exist and Pacific Telephone would not have difficulty providing increased services to the project site.[3]

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[1]Robert Walker, Manager, Student Assignments Office, San Francisco Unified School District, telephone communication, 15 September 1981.

[2]Al William, Marketing Representative, Market Division, Pacific Gas and Electric Company, telephone communication, 4 August 1981.

[3]Warren D. Dougherty, Planning, Pacific Telephone, telephone communication, 13 May 1981.

The project would result in a net increase in water consumption at the site of approximately 27,000 gallons per day (GPD). There is a 6-inch water main at Bryant Street and a 16-inch water main at Brannan and 12th Streets. These are of adequate size to serve the demands of the proposed project.[1]

The amount of wastewater generated would be about the same as the water consumed. There are 3-foot by 5-foot brick sewers on Freelon and Zoe Streets which would be adequate to handle increased sewage flows as well as storm drainage. It is not anticipated that the City would have any difficulties in providing services to the site.[2]

The proposed Welsh Commons would generate a net increase in solid waste. The Golden Gate Disposal Company would remove solid waste and does not anticipate problems in meeting the demand generated by the proposed project.[3]

8. Biology

	Yes	Maybe	No	N/A	Disc.
a. Would there be a reduction in plant and/or animal habitat or interference with the movement of migratory fish or wildlife species?			X		
b. Would the project affect the existence or habitat of any rare, endangered or unique species located on or near the site?			X		
c. Would the project require removal of mature scenic trees?			X		

The proposed project site currently has structures on it. There are no plant or animal habitats on the site.

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[1] Jack Kenck, Manager, San Francisco Water Department City Distribution Division, telephone conversation, 8 May 1981.

[2] Nathan Lee, San Francisco Clean Water program, letter communication, 7 May 1981.

[3] F.Garbarino, office manager, Golden Gate Disposal Company, telephone conversation, 12 May 1981.

9. Land. (topography, soils, geology) Would proposed project result in or be subject to:	Yes	Maybe	No	N/A	Disc.
a. Potentially hazardous geologic or soils conditions on or immediately adjoining the site? (slides, subsidence, erosion, and liquefaction)		X			X
b. Grading? (consider height, steepness and visibility of proposed slopes; consider effect of grading on trees and ridge tops)	X				X
c. Generation of substantial spoils during site preparation, grading, dredging or fill?		X			X

The proposed project site is essentially level at elevation +4 feet San Francisco Datum.[1] According to the geological map of San Francisco[2] the site is in the former Mission Swamp area and is underlain by artificial fill that was placed over soft, unconsolidated upper Bay Mud. An exploratory boring[3] encountered 7½ feet of loose to medium dense silty and clayey sand fill overlying 9½ feet of soft compressible Bay Mud. The Bay Mud is underlain by 3 feet of firm sandy clay, 27 feet of dense to very dense sand, 13 feet of stiff silty clay, 57 feet of very dense fine-grained sand and clayey sand. Highly weathered shale was encountered at -113 feet. Groundwater was encountered at +2 feet.

The site area would experience very strong to violent groundshaking during a major seismic event along any of the active fault zones which surround the city.[4] The site is in an area of potential liquefaction hazard[4] and potential tsunami inundation hazard.[4]

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[1] San Francisco Datum is 8.6 feet above mean sea level. Elevations in this section of the Initial Study are given with respect to this datum.

[2] Schlocker, J., Geology of the San Francisco North Quadrangle, California, U.S. Geological Survey Professional Paper 782, U.S. Government Printing Office, Wash., DC, 1974, plate 3, scale 1:24,000.

[3] Hillebrandt, D.H. (C.E. 16338) of Don Hillebrandt Associates, Preliminary Geotechnical Investigation, Proposed Welsh Commons, San Francisco, 28 September 1981, page 2. A copy of this report has been filed with the Office of Environmental Review.

[4] URS/John Blume and Associates, San Francisco Seismic Safety Investigation, San Francisco, June 1974, figure 3, figure 5, figure 7.

Since all existing fill would be removed from the site during excavation for the basement levels the potential for liquefaction would be extremely low.[1] Tsunami runup would not inundate the site unless the 500 year recurrence level were reached during high tide.[2] About 2 feet of water would cover the site during such an event.

During excavation, temporary shoring and underpinning would be necessary to prevent loss of support under adjacent structures, sidewalks and streets which rest on fill. Because of the high groundwater table, dewatering of the site would be necessary. This could be done by sump pumping if an impermeable shoring system were used, thereby maintaining the off-site groundwater level and preventing consolidation (settling) of the Bay Mud. A mat foundation or combined mat/spread footing foundation could be used if the dense sand layer below the Bay Mud is relatively uniform. If the depth of the sand layer is variable across the site "relatively short piles of moderate capacities" could be driven into the dense sand. The foundation system, lower-level basement slab and and basement retaining walls would need to be thoroughly waterproofed and designed to resist calculated hydrostatic pressures.[1]

Additional geotechnical studies to be made at the site would include a number of additional borings; additional laboratory testing; and detailed soil and foundation engineering analyses to evaluate (1) dewatering, shoring and excavation requirements; (2) specific foundation support design criteria and the estimated settlements of foundation, (3) lateral load criteria for permanent basement walls, and (4) design criteria for the lower level basement slabs. The results of these additional geotechnical studies would be presented in a comprehensive foundation investigation report and incorporated in construction of the proposed project.

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[1]Hillebrandt, D.H. (C.E. 16338) of Don Hillebrandt Associates, Preliminary Geotechnical Investigation, Proposed Welsh Commons, San Francisco, 28 September 1981, page 3; pages 3,4.

[2]Garcia, A. and Houston, J. Type 16 Flood Insurance Study, Wash., DC, U.S. Army Corps of Engineers Technical Report #H-75-17, November 1975, Figure 56.

10. Water. Would the proposed project result in:	Yes	Maybe	No	N/A	Disc.
a. Reduction in the quality of surface water?			X		
b. Change in runoff or alteration to drainage patterns?			X		
c. Change in water use?	X				X
d. Change in quality of public water supply or in quality or quantity (dewatering) of groundwater?		X			X

Water use would increase by approximately 27,000 gallons per day (GPD). During construction, watering would be required to prevent dust. The site is currently impermeable due to coverage of buildings. It is not anticipated that drainage patterns would change.

11. Energy/Natural Resources. Would the proposed project result in:					
a. Any change in consumption of energy?	X				X
b. Substantial increase in demand on existing energy sources?		X			X
c. An effect on the potential use, extraction, conservation or depletion of a natural resource?		X			X

The proposed project would generate an increase in energy consumption. Specific levels of consumption of electricity and natural gas will be discussed in more detail in the EIR, however fossil fuel consumption would contribute to the depletion of natural resources. The proposed project plans to use passive solar energy in approximately one-third (54) of the units and in heating hot water for all units. An analysis of the solar energy potential will be contained in the EIR.

12. Hazards. Would the proposed project result in:	Yes	Maybe	No	N/A	Disc.
a. Increased risk of explosion or release of hazardous substancess (e.g., oil, pesticides, chemicals or rediation), in the event of an accident, or cause other dangers to public health and safety?	___	___	X	___	___
b. Creation of or exposure to a potential health hazard.	___	___	X	___	___
c. Possible interference with an emergency response plan or emergency evacuation plan?	___	___	X	___	___

It is not anticipated that the proposed project would result in any increased risk of explosion or release of hazardous substances.

13. Cultural. Would the proposed project:					
a. Include or affect a historic site, structure, or building?	___	___	X	___	___
b. Include or affect a known archaeological resource or an area of archaeological resource potential?	___	___	X	___	___
c. Cause a physical change affecting unique ethnic or cultural values?	___	___	X	___	___

Reference to Here Today indicates that no architecturally or historically significant buildings exist adjacent to the project site.[1] No structures in the area are City Landmarks. A map prepared by the Department of City Planning shows that no archaeological sites are known to exist at the project site. A visual inspection of the proposed property site to locate prehistoric archaeological material and an inspection of a geotechnical augerboring to determine the nature of the subsurface

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[1] Junior League of San Francisco, "South of Market," Here Today: San Franciso's Architectural Heritage, Phoenix, Arizona, Chronical Books, 1978, pp. 92-100.

composition of the proposed construction area was conducted on 10 September 1981.[1] Neither the surface inspection of the small portion of open space nor the augerboring revealed any indication of the presence of aboriginal remains or unexpected historical material.

C. MITIGATION MEASURES:	Yes	No	Disc.
a. Are mitigation measures included in the project?	X		X
b. Are other mitigation measures available?	Possible if need is identified		

The development sponsors have indicated their intention to incorporate mitigation measures which they consider to be reasonable and appropriate, as these measures are identified during the course of the environmental review process for this project. A number of mitigation measures have been included in the project design to date.

1. Provision of 265 on-site parking spaces to accommodate people using the residential units and office/support, retail/service space (Code requires 253 spaces).
2. For the office/support and retail/service space the project sponsor would encourage efforts to adjust working hours, provide ride-sharing coordination and provide preferential parking for van-pool and car pool vehicles.
3. During excavation, unpaved demolition and construction areas would be wetted at least twice a day to hold down dust.
4. Space would be provided for residents for recycling of materials such as glass, metal, paper, and newspaper.

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[1] A copy of this survey performed by Holman & Associates, Archaeological Consultants is available at the Office of Environmental Review, Department of City Planning.

5. The project sponsors plan to incorporate the use of solar energy for heating hot water in the residential units.
6. The development would provide internal security measures such as closed-circuit television system, security guard, well-lighted entryways, alarm systems, an emergency communication system, and power supply and water supply to minimize the need for police and fire protection services.

The following mitigation measures are required by the City and County of San Francisco for development approval.

1. The development would incorporate low-flow faucet and toilet fixtures to reduce water consumption and wastewater. The office retail and residential maintenance areas would be equipped with trash compactors to reduce the volume of solid waste requiring storage and transport.
2. The development would comply with minimum energy use requirements of Title 24 of the California Administrative Code.
3. Development sponsors would comply with all requirements of the San Francisco Noise Ordinance, including limiting noise emissions from power construction equipment to 80 dBA at a distance of 100 feet.
4. The project sponsor and project contractor would meet with the Bureau of Engineering to determine the necessary feasible measures to reduce noise during piledriving on the project site.
5. A qualified archaeologist selected by the project sponsor would make scheduled visits during the process of demolition and excavation for the proposed project. Should evidence of historical artifacts of significance be found by the archaeologist, the Environmental Review Officer and the current Landmarks Preservation Advisory Board would be notified. The significance of the find would be determined and feasible mitigation measures, including appropriate security measures, would be recommended that could be implemented to preserve or recover such artifacts. The Environmental Review Officer would then recommend specific mitigation

measures, if necessary, and recommendations would be sent to the State Office of Historic Preservation. Excavation or construction that might damage the discovered cultural resources would be suspended for a maximum of 4 weeks to permit inspection, and recommendation for retrieval, if appropriate.

6. A detailed foundation structural design study would be done for the building by a licensed structural engineer and a geotechnical consultant. The project sponsor would follow recommendations of these studies during final design and construction of the development.

D. ALTERNATIVES:	Yes	No	Disc.
a. Were alternatives considered:	X		X

Several alternatives to the proposed project were under consideration:

1. The no-project alternative would retain the existing structures on the currently vacant site.
2. The project sponsor examined the possibility of using the site as all industrial or a mix of industrial/residential. The rental rates that would be required to amortize the cost of the structure would be prohibitive for such a use. The residential/industrial uses were considered incompatible by the project sponsors. Both uses were rejected.
3. The project sponsors also considered reducing the hieght of the proposed development, but rejected this alternative because they felt that the objectives of the proposed project would not be met.

The EIR will contain further discussion of project alternatives.

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Attn: Carl Imparato

Senior Escort Program
South of Market Branch
814 Mission Street
San Francisco, CA 94103
Attn: Leslie Halford
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1173 Mission Street
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San Francisco, CA 94103

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San Francisco, CA 94103
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San Francisco, CA 94108

Ron and Ann Martin
131 Lake Merced Hill Blvd.
San Francisco, CA 94132

Franklin Machine Works, Inc.
264 Mallorca Way
San Francisco, CA 94123

Charles and Helen Jones
49 Zoe Street
San Francisco, CA 94107

APPENDIX B

LEVELS OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS*

Level of Service A

Level of Service A describes a condition where the approach is an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.

Level of Service B

Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can generally be described as very good.

Level of Service C

Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The dirver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.

Level of Service D

Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.

Level of Service E

Capacity occurs at Level of Service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting upstream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.

Level of Service F

Level of Service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.

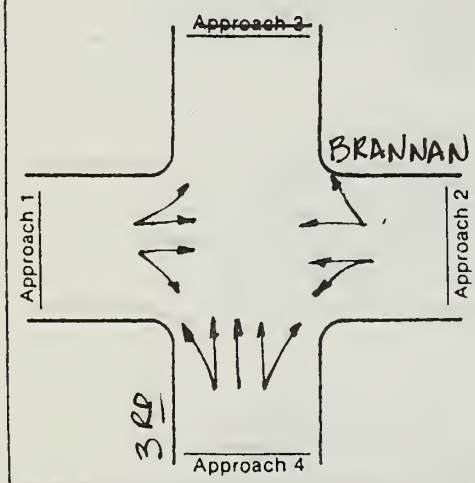
*City and County of San Francisco, Department of Public Works, Traffic Engineering Division.

INTERSECTION CAPACITY ANALYSIS

Intersection BRANNAN / 3RD Design Hour P.M. PEAK 4:30 - 5:30

Other Conditions EXISTING TRAFFIC (COUNTED ON 2/23/81)

1. Identify Lane Geometry



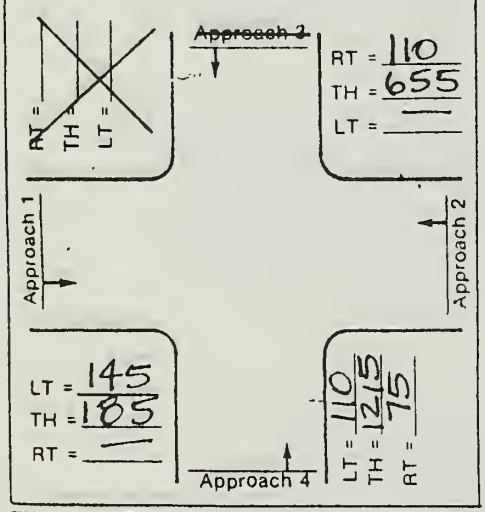
4. Left Turn Check

	Approach 1	2	3	4
a. Number of change intervals per hour	45			
b. Left turn capacity on change interval, in vph	90			
c. G/C Ratio	.45			
d. Opposing volume in vph	385			
e. Left turn capacity on green, in vph	155			
f. Left turn capacity in vph (b + e)	245			
g. Left turn volume in vph	145			
h. Is volume > capacity (g > f)?	NO			

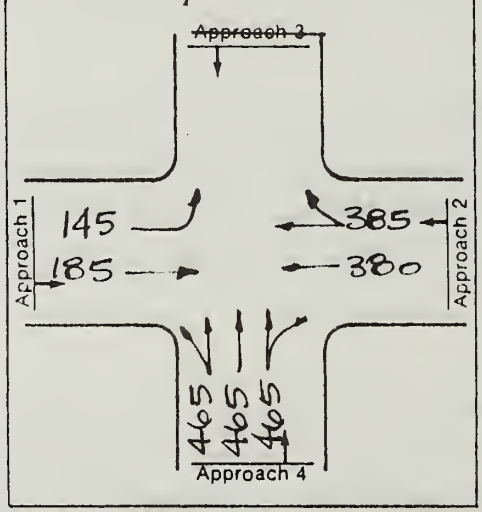
6b. Volume Adjustment for Multiphase Signal Overlap

Probable Phase	Possible Critical Volume in vph	Volume Carryover to next phase	Adjusted Critical Volume in vph

2. Identify Volumes, in vph



5. Assign Lane Volumes, in vph



7. Sum of Critical Volumes

465 + 385 + 145 + —

= 995 vph

8. Intersection Level of Service

B

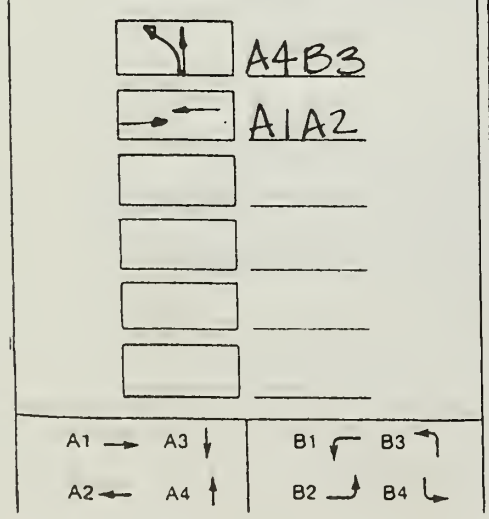
9. Recalculate

Geometric Change _____

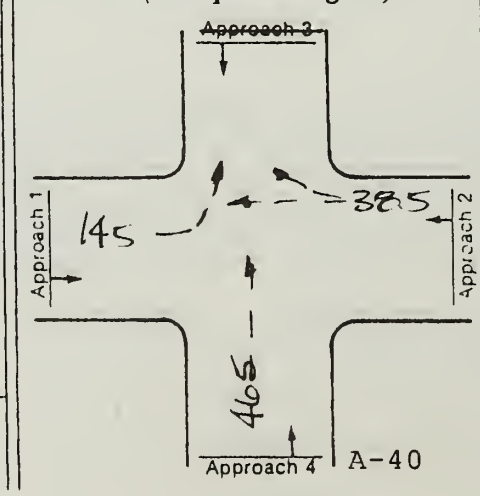
Signal Change _____

Volume Change _____

3. Identify Phasing



6a. Critical Volumes, in vph (two phase signal)



Service Level Ranges

Level	Sum of Critical Volumes 2 Phase	3 Phase	4+ Phases
A	900	855	825
B	1050	1000	965
C	1200	1140	1100
D	1350	1275	1225
E	1500	1425	1375
F	not applicable		

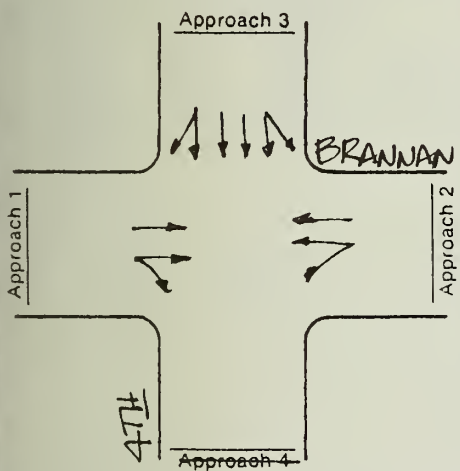
INTERSECTION CAPACITY ANALYSIS

4:30 - 5:30

Intersection BRANNAN / 4TH Design Hour P.M. PEAK

Other Conditions EXISTING TRAFFIC (COUNTED 1/15/81)

1. Identify Lane Geometry



4. Left Turn Check

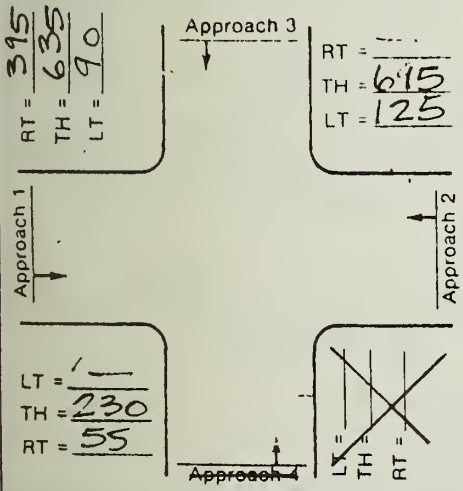
	Approach 1	2	3	4
a. Number of change intervals per hour				
b. Left turn capacity on change interval, in vph				
c. G/C Ratio				
d. Opposing volume in vph				
e. Left turn capacity on green, in vph				
f. Left turn capacity in vph (b + e)				
g. Left turn volume in vph				
h. Is volume > capacity (g > f)?				

6b. Volume Adjustment for Multiphase Signal Overlap

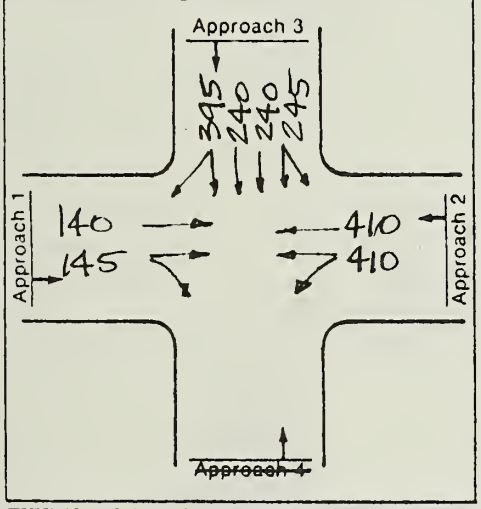
Probable Phase	Possible Critical Volume in vph	Volume Carryover to next phase	Adjusted Critical Volume in vph

2 Ø

2. Identify Volumes, in vph



5. Assign Lane Volumes, in vph



7. Sum of Critical Volumes

410 + 395 + — + —

= 805 vph

8. Intersection Level of Service

A

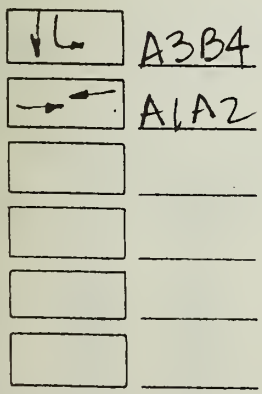
9. Recalculate

Geometric Change _____

Signal Change _____

Volume Change _____

3. Identify Phasing

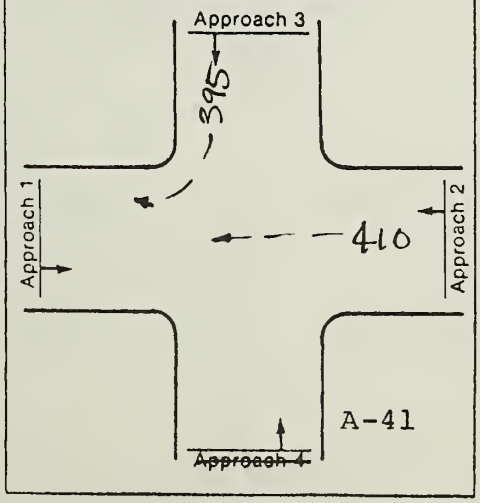


A3B4

A1A2

A1 →	A3 ↓	B1 ↱	B3 ↰
A2 ←	A4 ↑	B2 ↳	B4 ↳

6a. Critical Volumes, in vph (two phase signal)



A-41

Service Level Ranges

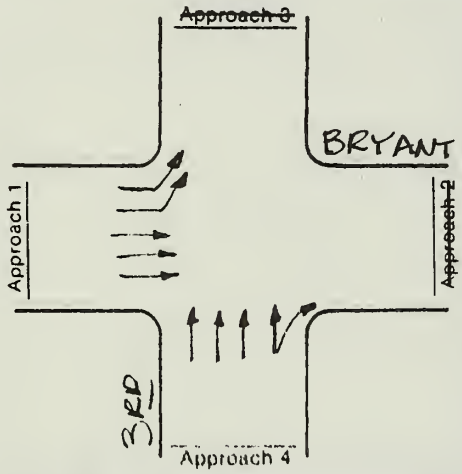
Level	Sum of Critical Volumes 2 Phase	3 Phase	4+ Phases
A	900	855	825
B	1050	1000	965
C	1200	1140	1100
D	1350	1275	1225
E	1500	1425	1375
F	not applicable		

INTERSECTION CAPACITY ANALYSIS

Intersection BRYANT / 3RD Design Hour AM PEAK 7:30-8:30

Other Conditions EXISTING TRAFFIC (COUNTED ON 1/7/81)

1. Identify Lane Geometry



4. Left Turn Check

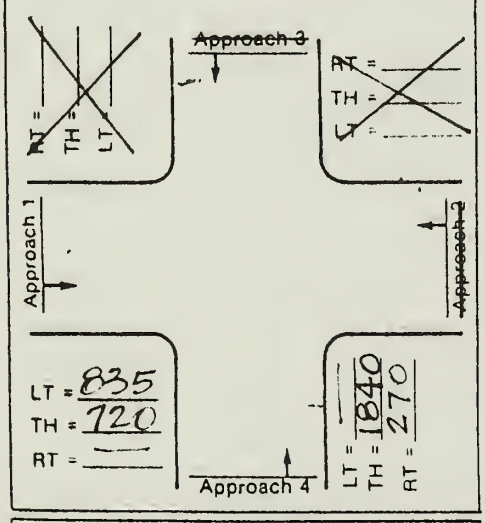
	Approach 1	2	3	4
a. Number of change intervals per hour				
b. Left turn capacity on change interval, in vph				
c. G/C Ratio				
d. Opposing volume in vph				
e. Left turn capacity on green, in vph				
f. Left turn capacity in vph (b + e)				
g. Left turn volume in vph				
h. Is volume > capacity (g > f)?				

6b. Volume Adjustment for Multiphase Signal Overlap

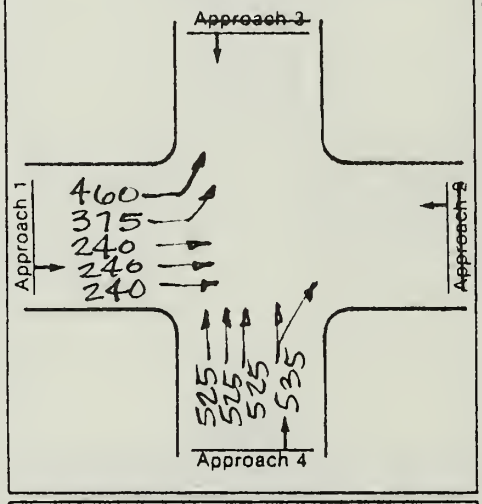
Probable Phase	Possible Critical Volume in vph	Volume Carryover to next phase	Adjusted Critical Volume in vph

2 φ

2. Identify Volumes, in vph



5. Assign Lane Volumes, in vph



7. Sum of Critical Volumes

460 + 535 + — + —

= 995 vph

8. Intersection Level of Service

B

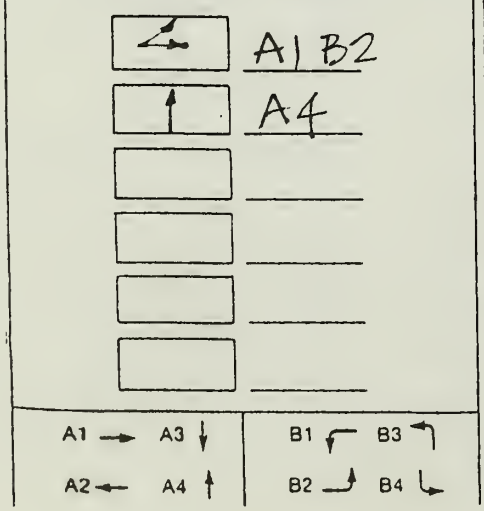
9. Recalculate

Geometric Change _____

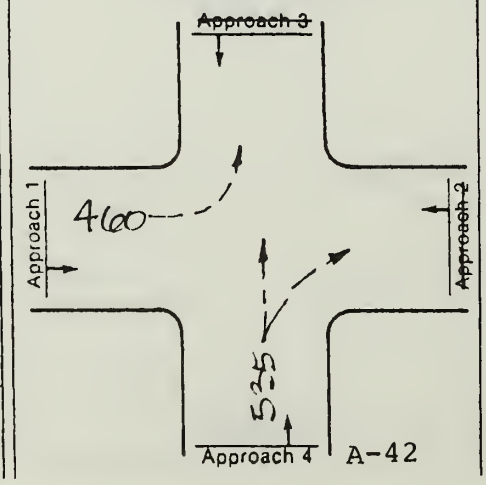
Signal Change _____

Volume Change _____

3. Identify Phasing



6a. Critical Volumes, in vph (two phase signal)



Service Level Ranges

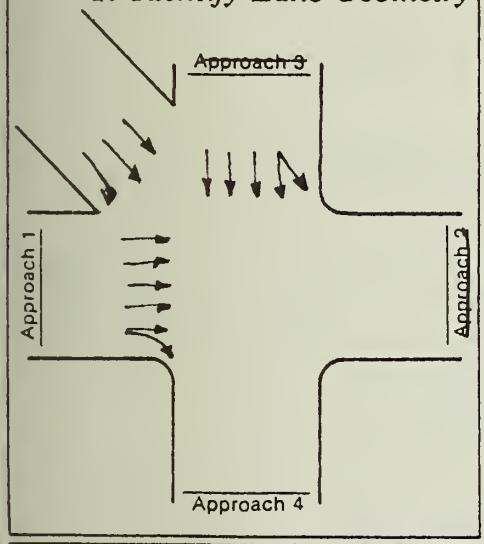
Level	Sum of Critical Volumes 2 Phase	3 Phase	4+ Phases
A	900	855	825
B	1050	1000	965
C	1200	1140	1100
D	1350	1275	1225
E	1500	1425	1375
F	not applicable		

INTERSECTION CAPACITY ANALYSIS

Intersection BRYANT / 4TH Design Hour A.M. PEAK 7:30-8:30

Other Conditions EXISTING TRAFFIC (COUNTED 3/12/81)

1. Identify Lane Geometry



4. Left Turn Check

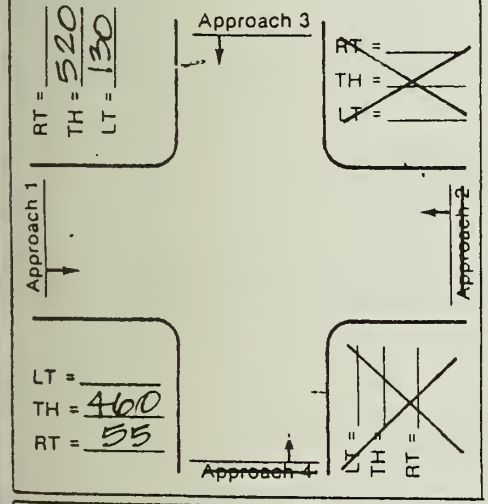
	Approach 1	2	3	4
a. Number of change intervals per hour				
b. Left turn capacity on change interval, in vph				
c. G/C Ratio				
d. Opposing volume in vph				
e. Left turn capacity on green, in vph				
f. Left turn capacity in vph (b + e)				
g. Left turn volume in vph				
h. Is volume > capacity (g > f)?				

6b. Volume Adjustment for Multiphase Signal Overlap

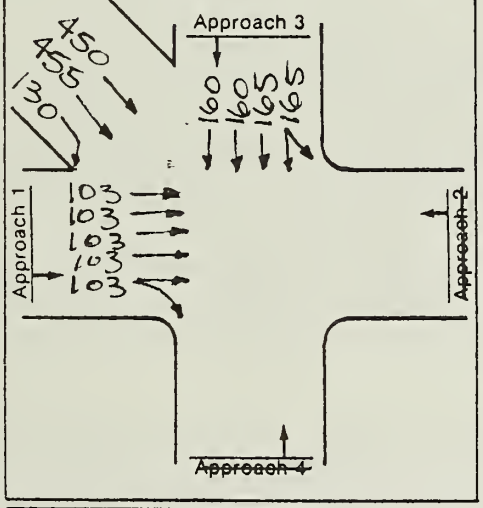
Probable Phase	Possible Critical Volume in vph	Volume Carryover to next phase	Adjusted Critical Volume in vph

2. Identify Volumes, in vph

RAMP: 905TH, 130RT



5. Assign Lane Volumes, in vph



7. Sum of Critical Volumes

455 + 103 + 165 + —

= 723 vph

8. Intersection Level of Service

A

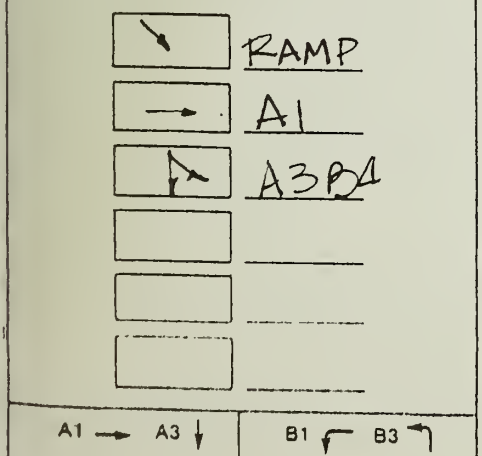
9. Recalculate

Geometric Change _____

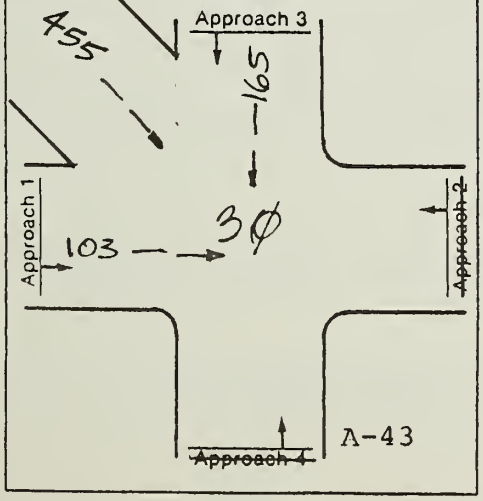
Signal Change _____

Volume Change _____

3. Identify Phasing



6a. Critical Volumes, in vph (two phase signal)



Service Level Ranges

Level	Sum of Critical Volumes 2 Phase	3 Phase	4+ Phases
A	900	855	825
B	1050	1000	965
C	1200	1140	1100
D	1350	1275	1225
E	1500	1425	1375
F	not applicable		

APPENDIX B

PROJECTED PERSON-TRIP GENERATION DURING PM PEAK HOUR

Land Use	Auto	Muni	BART	AC	SM	SP	GGT	Ferry	Walk/ Other
Dwelling Units	65	25	5	5	--	10	5	--	5
Wholesale/Service and Industrial	50-70	20-30	5-10	5-10	--	5-10	5-10	5-10	--
Retail Work	10-15	10-15	--	--	--	--	--	--	--
Retail Customer	15	40	--	--	--	--	--	--	40
	140-165*	95-110*	10-15*	10-15*	--	15-20*	10-15*	--	45

*The EIR transportation analysis assumed the higher number for each mode.

APPENDIX C

Fundamental Concepts of Environmental Noise

This section provides background information to aid in understanding the technical aspects of this report.

Three dimensions of environmental noise are important in determining subjective response. These are:

a. the intensity or level of the sound;
b. the frequency spectrum of the sound;
c. the time-varying character of the sound.

Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB), with 0 dB corresponding roughly to the threshold of hearing.

The "frequency" of a sound refers to the number of complete pressure fluctuations per second in the sound. The unit of measurement is the cycle per second (cps) or Hertz (Hz). Most of the sounds which we hear in the environment do not consist of a single frequency, but of a broad band of frequencies, differing in level. The quantitative expression of the frequency and level content of a sound is its sound spectrum. A sound spectrum for engineering purposes is typically described in terms of octave bands which separate the audible frequency range (for human beings, from about 20 to 20,000 Hz) into ten segments.

Many rating methods have been devised to permit comparisons of sounds having quite different spectra. Fortunately, the simplest method correlates with human response practically as well as the more complex methods. This method consists of evaluating all of the frequencies of a sound in accordance with a weighting that progressively and severely deemphasizes the importance of frequency components below 1000 Hz, with mild deemphasis above 5000 Hz. This type of frequency weighting reflects the fact that human hearing is less sensitive at low frequencies and extreme high frequencies than in the frequency midrange.

The weighting curve described above is called "A" weighting, and the level so measured is called the "A-weighted sound level", or simply "A-level".

The A-level in decibels is expressed "dBA"; the appended letter "A" is a reminder of the particular kind of weighting used for

the measurement. In practice, the A-level of a sound source is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve. All U.S. and international standard sound level meters include such a filter. Typical A-levels measured in the environment and in industry are shown in Figure C-1.

Although the A-level may adequately describe environmental noise at any instant in time, the fact is that the community noise level varies continuously. Most environmental noise includes a conglomeration of distant noise sources which creates a relatively steady background noise in which no particular source is identifiable. These distant sources may include traffic, wind in trees, industrial activities, etc. These noise sources are relatively constant from moment to moment, but vary slowly from hour to hour as natural forces change or as human activity follows its daily cycle. Superimposed on this slowly varying background is a succession of identifiable noisy events of brief duration. These may include nearby activities or single vehicle passages, aircraft flyovers, etc., which cause the environmental noise level to vary from instant to instant.

To describe the time-varying character of environmental noise, the statistical noise descriptors L10, L50, and L90 are commonly used. The L10 is the A-weighted sound level equaled or exceeded during 10 percent of a stated time period. The L10 is considered a good measure of the "average peak" noise. The L50 is the A-weighted sound level that is equaled or exceeded 50 percent of a stated time period. The L50 represents the median sound level. The L90 is the A-weighted sound level equaled or exceeded during 90 percent of a stated time period. The L90 is used to describe the background noise.

As it is often cumbersome to describe the noise environment with these statistical descriptors, a single number descriptor called the Leq is also widely used. The Leq is defined as the equivalent steady-state sound level which in a stated period of time would contain the same acoustic energy as the time-varying sound level during the same time period. The Leq is particularly useful in describing the subjective change in an environment where the source of noise remains the same but there is change in the level of activity. Widening roads and/or increasing traffic are examples of this kind of situation.

In determining the daily measure of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises.

During the nighttime, exterior background noises are generally lower than the daytime levels. However most house-

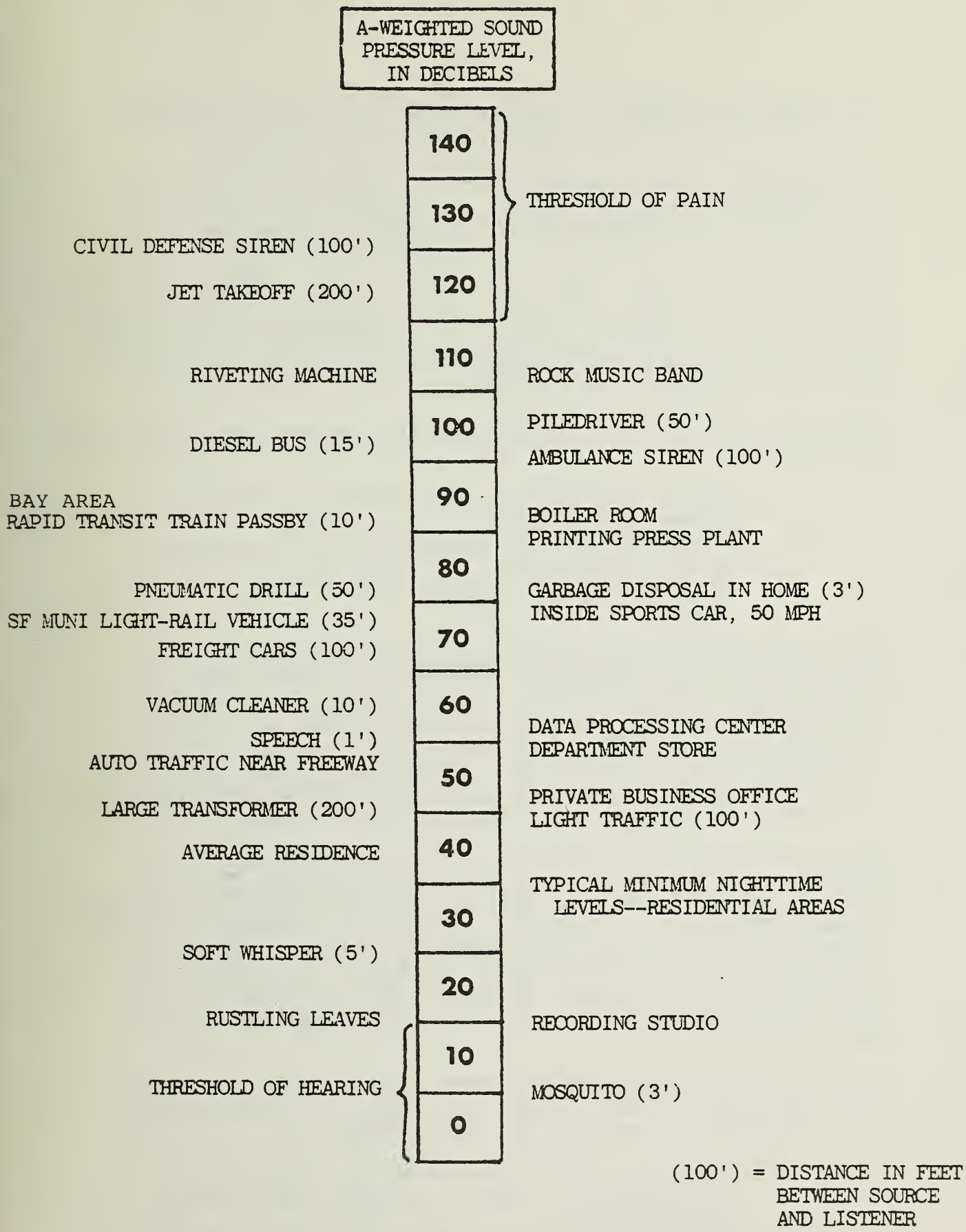


FIGURE A-1: TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND INDUSTRY

hold noise also decreases at night and exterior noises become very noticeable. Further most people are sleeping at night and are very sensitive to noise intrusion.

To account for human sensitivity to nighttime noise levels a descriptor, Ldn, (day-night equivalent sound level),was developed. The Ldn divides the 24-hour day into the daytime of 7 am to 10 pm and the nighttime of 10 pm to 7 am. The nighttime noise level is weighted 10 dB higher than the daytime noise level. The Ldn, then, is the A-weighted average sound level in decibels during a 24-hour period with 10 dBA added to the hourly Leqs during the nighttime. For highway noise environments the Leq during the peak traffic hour is approximately equal to the Ldn.

The effects of noise on people can be listed in three general categories:

1. subjective effects of annoyance, nuisance, dissatisfaction;
2. interference with activities such as speech, sleep, learning;
3. physiological effects such as startle, hearing loss.

The sound levels associated with environmental noise, in almost every case, produce effects only in the first two categories. Unfortunately, there is as yet no completely satisfactory measure of the subjective effects of noise, or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance, and habituation to noise over differing individual past experiences with noise.

Thus, an important parameter in determining a person's subjective reaction to a new noise is the existing noise environment to which one has adapted: the so-called "ambient" noise. "Ambient" is defined as "the all-encompassing noise associated with a given environment, being a composite of sounds from many sources, near and far". In general, the more a new noise exceeds the previously existing ambient, the less acceptable the new noise will be judged by the hearers.

With regard to increases in noise level, knowledge of the following relationships will be helpful in understanding the quantitative sections of this report:

a) Except in carefully controlled laboratory experiments, a change of only 1 dBA cannot be perceived.
b) Outside of the laboratory, a 3-dBA change is considered a just-noticeable difference.

c) A change in level of at least 5 dBA is required before any noticeable change in community response would be expected.
d) A 10-dBA change is subjectively heard as approximately a doubling in loudness, and would almost certainly cause an adverse change in community response.

APPENDIX D

ECONOMICS

I. Commercial Space in San Francisco

Downtown San Francisco is the office center of the Bay Area. There are approximately 57.3 million square feet of office space in San Francisco.[1] Space in major buildings downtown has been added at a rate of 1.8 million square feet per year during the late 1970s (Table A-1, page A-2). For the decade as a whole, the average rate has been 1.6 million square feet annually.

An additional 9.2 million square feet of office space will be added when the 32 highrise buildings already approved as of February 1982 are built, Table A-2, page A-53. Another 9.2 million square feet of office space would be added if the 54 projects proposed or under review as of February 1982 were all eventually built (Table A-2, page A-52).

The vacancy rate in downtown office buildings was 1.04% in May 1981 and has been declining - from 8.9% in 1977 to 4.2% in 1978 to 2.6% in 1979 to 2.3% in 1980.[2] Currently, the vacancy rate for modern air-conditioned high rises in the Financial District approaches zero percent.[3] Most space currently under construction is already pre-leased.

Rents in premium office space range in 1981 from about $22 to $36 per square foot per year, with the higher rents for space in newer buildings.[4] Space on the upper floors of

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[1] Department of City Planning, Major Office Building Construction in San Francisco, 1 November 1981, Table 1.

[2] Building Owners and Managers Association (BOMA), telephone communication, 24 June 1981 and 27 January 1982. BOMA's vacancy rate is estimated on their survey of office buildings, including newer, older, smaller, and larger space.

[3] The Office Network, Inc., National Office Market Report, Spring/Summer 1981 indicates a vacancy rate of 0.4% for office buildings in downtown.

[4] 101 Montgomery Street FEIR, EE80.26, 191, page 253. Rents quoted here are gross rents. Also see The Office Network, Inc., National Office Market Report, Spring/Summer 1981, which quotes San Francisco office rents for Class A space in the range of $24.00-$36.00 per square foot per year for existing buildings, and $24.00-$40.00 for buildings under construction.

TABLE A-1

MAJOR OFFICE BUILDING CONSTRUCTION IN SAN FRANCISCO
AS OF February 11, 1982 in gross square feet

Year	Ttl.Gross Sq. Ft. Cmpltd.	5-Year Total	5-Year Annual Average	Cumulative Total All Office Blds.	All Downtown Office Buildings
Pre-1960		(Net) (3)	(Net) (3)	28,145,000 (1)	24,175,000 (2)
1960	1,183,000				
1961	270,000				
1962	---				
1963	---				
1964	1,413,000				
		2,866,000	573,200		
1960-1964		(2,580,000)	(516,000)	30,725,000	26,754,000 (3)
1965	1,463,000				
1966	973,000				
1967	1,453,000				
1968	1,234,000				
1969	3,256,000				
		8,379,000	1,675,800		
1965-1969		(7,541,000)	(1,508,000)	38,266,000	34,295,000
1970	1,853,000				
1971	---				
1972	1,961,000				
1973	2,736,000				
1974	2,065,000				
		8,615,000	1,723,000		
1970-1974		(7,753,000)	(1,550,000)	46,019,000	42,048,000
1975	536,000				
1976	2,429,000				
1977	2,660,000				
1978	---				
1979	2,532,000				
		8,157,000	1,631,400		
1975-1979		(7,341,000)	(1,468,000)	53,360,000	49,389,000
1980	1,284,000				
1981/82	3,138,000			57,340,000	53,369,000
Under Construction 82/84	6,830,000	11,252,000	2,250,000		
1980-1984		(10,127,000)	(2,025,000)	63,317,000	58,517,000
Approved Projects	2,445,000			65,518,000	59,198,000

Source: Department of City Planning records

(1) Source: S.F. Downtown Zoning Study - Working Paper No.1, January 1966, Appendix, Table 1, Part 1. For pre 1965, includes the area bounded by Vallejo, Franklin, Central Skyway, Bryant and Embarcadero. Also includes 1/3 of mixed use retail/office. For post 1964, includes the entire city.

(2) Gross Floor Space for downtown offices are included for the following functional areas: Financial, Retail, Hotel, Jackson Square, Golden Gateway, Civic Center, South of Market, and Outer Market Street as defined in the 1/66 report. For post 1964, the entire area east of Franklin is included.

(3) Net equals 90% of (gross). Net new space is added at an increase factor of 90%, since is assumed that space equal to 10% of a new building is demolished to make land available for the new replacement building.

TABLE A-2

MAJOR DEVELOPMENT PROPOSALS UNDER CONSTRUCTION
OR ACTIVE REVIEW WITHIN THE
DEPARTMENT OF CITY PLANNING MARCH 1982

	Number Projects	Office Gr. Square Feet	Number Housing Units
Proposed:			
Total City	53	8,823,600	2,754
South of Market	26	4,439,000	351
Approved:			
Total City	16	2,849,000	559
South of Market	18	1,451,000	0
Under Construction:			
Total City	16	6,971,000	1,023
South of Market	9	3,260,000	0
Totals:			
Total City	85	18,643,600	4,336
South of Market	40	8,384,000	351

Source: Environmental Impact Planning Corporation
San Francisco Department of City Planning
San Francisco Department of Public Works
Bureau of Building Inspection

new, top-quality buildings that will go on the market in 1981 are expected to command rents of up to $42 per square foot per year. Downtown office rents have been increasing rapidly. Estimates indicate they are rising by 1 to 2% per month.[1]

Consistently low vacancy rates and rapidly rising rents suggest that demand for space is strong and that the construction of new office space in San Francisco has failed to keep pace with growing demand. Because of this backlog, demand for office space in the next several years will continue to reflect both the growth of office employment and the cumulative shortage of space that now exists.

Retail space in downtown office buildings rents for about $24 to $36 per square foot per year[2]. Vacant retail space in the Financial District is as hard to find as is vacant office space.

South of Market Area[3]

The South of Market area, extending from Market Street to China Basin and the Embarcadero to South Van Ness, has experienced encroachment by the rapidly growing office and commercial uses described above. In the last decade, about 60% (9.81 million square feet) of the total 15.56 million square feet of major office building space built in the downtown area was constructed in South of Market.

Most of the South of Market area, particularly the area west of Second Street and South of Folsom, has historically been a mixed use, industrial area. The City Planning Department has concluded that "the strong office demand and expansion has resulted in the escalation of building and land values and the conversion and demolition of industrial structures for office use."[4] The major non-industrial developments and redevelopment areas such as Yerba Buena Center, Rincon Hill, South Beach, and the Showplace Square have contributed to the pressure on increased land and building values.

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[1] Recht Hausrath & Associates; and Henrikson, Marcene, "No Place to Grow," San Francisco Business, May 1981, pp. 6-10.

[2] This represents the lower end of the range. Rents reach $50 per square foot in certain locations within the downtown. Richard Morton, San Francisco Chamber of Commerce, telephone conversation, April 16, 1982.

[3] San Francisco Department of City Planning, "South of Market Interim Controls", memorandum 26 January 1982.

[4] Ibid, page 1.

Table A-3 indicates property transactions in the South of Market area 1980-1981. Table A-4 shows estimated land values from 1977 to 1980 along the Second Street corridor, and Table A-5 provides an indication of 1981 sales prices in the South of Market area.

TABLE A-3

PROPERTY TRANSACTIONS
IN SOUTH OF MARKET, 1980-1981

Year(s)	Number of Lots Which Changed Ownership
1980	158
1981	114
Both in 1980 and 1981	12
Total	284

Source: Assessor's Office, City of San Francisco, Department of City Planning

Table A-2 lists the number of projects in the South of Market area that are currently under review by the Department of City Planning, have either been approved or are actually being constructed. Table A-6 is a list of the specific projects approved, under construction, or in review.

TABLE A-4
ESTIMATED LAND VALUES

YEAR	VALUES PER SQUARE FOOT
1977[1]	$ 20-30
1978	25-35
1979	35-45
1980	45-55
1981/82[3]	60-90

[1]Ron Katz, Ritchie + Ritchie Corporation

[2]Howard Sheahan, Merrill Lynch Realty

[3]The range of current values represents averages of ranges reported by Jeff Schultz, Coldwell Banker; Donald Sambucci, Century 21 - Lamply Realty, Inc.; Richard Maguire, Allied American Properties; Baldwin + Howell Brokerage Services; Ron Katz, Ritchie + Ritchie Corporation; Howard Sheahan, Merrill Lynch Realty, per telephone communications, 20 January 1982."

TABLE A-5
SAMPLE OF 1981 SALES PRICES IN
SOUTH OF MARKET STUDY AREA

Address	Square Footage (Land & Bldg.)	Total Price	Price/s.f.
75 Lansing	12,250 - bldg., 19,000 - lot	$1-2 million	$ 48
760 Harrison	12,136 - bldg., 13,600 - lot	$1.5 million	$ 58
400 2nd	77,200 - bldg., 15,200 - lot	$3.5 million	$ 39
51-60 Federal	127,580 - bldg., 22,812 - lot	$3.7 million	$ 25
77, 85 Federal	136,000 - bldg., 92,000 - lot	$25 million	$ 109
539 Bryant	86,800		$ 57
520 3rd	150,000 - bldg., 31,920 - land	$6.25 million	$ 34
617-19 Bryant	21,000	$860,000	$ 40
640 2nd	24,000 - bldg.		$ 32
35 Stanford	48,000 - bldg., 16,000 - lot		$ 80
211 Brannan	18,000 - bldg., 30,000 lot		$ 75
1st & 2nd/ Townsend	249,000		$ 64
Bracco	44,000		$ 100 (ask)
123 Townsend	151,000 - bldg., 22,800 - lot		$ 75 (ask)
101 Townsend			$ 61
139 Townsend		$3.2 million	$ 43
601 Townsend	105,000 - bldg., 75,625 - lot		$ 40

Sample size, n = 17
Mean, x = $58 per square foot

Source: Fuller Commercial Brokerage, November 1981
Department of City Planning

TABLE A-6

SUMMARY OF THE SOUTH OF MARKET AREA

	No. of Projects	Office Square Feet	Housing Units
Proposed:	29	5,203,000	351
Approved:	4	1,2732000	0
Under Construction:	8	3,046,000	0
Totals:	41	9,521,000	351

TABLE A-6 (1 of 2)

PROJECTS APPROVED, UNDER CONSTRUCTION OR UNDER REVIEW IN SOUTH OF MARKET AREA

Name	Projects Approved Block Number and District	Lot Number	Office Sq. Ft.	Height Stories	Height Feet	On-Site Parking	E.E. Number
Spear Main Bldg.	3717 C-3-)	5,10, 11	337,000	19	240	22	81.61
Pacific III Apparel Mart	3705 C-3-G	3	332,000	30	376	0	80.315
315 Howard	3738 C-3-S	1	389,000	24	320	0	79.196
1155 Market	3702 C-3-G	42A,43	144,000	12	150	14	81.25
135 Main	3717 C-3-S	12,13	248,000	22	340	22	81.67
PROJECTS UNDER CONSTRUCTION IN THE SOUTH OF MARKET AREA							
101 Mission (100 Spear Building)	3717 C-3-0	1	214,000	20	273	0	79.236
Federal Reserve	3712 C-3-0	1-4,16-20 7,13-15	460,000	12	195	0	78.207
Gift Mart	3735 C-3-S	N/A	320,000	12	150	14	None
150 Spear	3717 C-3-0	3,4	330,000	N/A	N/A	N/A	78.413
5 Fremont Center	3709 C-3-0	4-7,10	742,000	43	600	160	80.268
YBC West	3724 C-3-S	N/A	335,000	6	N/A	190	None
25 Jessie at Ecker	3708 C-3-0	N/A	111,000	N/A	N/A	N/A	None
Pacific Gateway	3718 C-3-0	N/A	548,000	N/A	N/A	N/A	None
China Basin Expansion	3803 M-2	All	200,000	N/A	N/A	N/A	-

(C) Conversion (generally industrial and/or warehouse to office).
(M) Mixed use - office/residential.

TABLE A-6 (2 of 2)
PROJECTS UNDER REVIEW IN THE SOUTH OF MARKET AREA

Name	Block Number	Lot Number	Office Sq. Ft.	Height Stories	Height Feet	On-Site Parking	E.E. Number
Marathon - 2nd and Folsom	3749 M-1	25,51	754,000	11	105	300	81.18
868 Folsom	3733 M-1	24	65,000	8	N/A	107	81.2
562 Mission	3708 C-3-0	15-18	580,000	34	494	74	81.297
201 Spear	3741 C-3-S	16,17,26	263,000	18	248	50	80.337
109-199 Main Mission	3717 C-3-0	14-18	352,000	27	394	46	81.183
1st & Market	3709 C-3-0	12	368,000	20	340	66	81.113
Hunt/Knight Building (M)	3707 C-3-0	1-3,54-56,59	340,000	40	N/A	100	80.355
71 Stevenson	3708 C-3-0	28,29	346,000	22	N/A	N/A	81.493
UCB Expansion	3735 C-3-S	12,56	61,000	N/A	N/A	143	80.106
New Montgomery at Howard	3722 C-3-S	21	111,000	N/A	N/A	N/A	81.290
144 2nd at Minna	3722 C-3-0	4	30,000	N/A	N/A	N/A	81.417
490 2nd & Bryant (C)	3763 M-1	7	40,000	N/A	N/A	N/A	81.287
480 2nd & Stillman (C)	3763 M-1	6	35,000	N/A	N/A	N/A	81.381
252 Townsend at Lusk	3787 M-2	24	70,000	N/A	N/A	137	81.306
123 Townsend at 2nd (C)	3794 M-2	10	104,000	N/A	N/A	N/A	81.569
121 Steuart/Mission	3715 C-3-0	3	49,000	7	N/A	N/A	81.705
466 Clementine at 6th	3732 C-3-S	70,71	10,000	3	N/A	N/A	81.548
539 Bryant and Zoe (C)	3736 C-3-S	41	86,000	N/A	N/A	N/A	81.693
548 5th at Brannan (C)	3778 M-2	1B	42,000	N/A	N/A	N/A	81.630
1151 Market a' 8th	3702 C-3-G	44,44A1	145,000	13	N/A	N/A	81.549
1660 Mission/Otis	3512	6,5,8	92,000	N/A	N/A	N/A	82.14
625 2nd (C)	3789 M-2	4,5,7	168,000	N/A	N/A	N/A	81.552
Welsh Commons	3776 M-2	1-19	N/A	11	N/A	352	81.59
615 2nd & Brannan (C)	3789 M-2	8	106,000	N/A	N/A	N/A	82.31
655 Fifth Street at Towsend	3786 M-2	17	126,000	N/A	N/A	N/A	82.33
1041 Market	3703 M-2	58,68,70	96,000	N/A	N/A	N/A	81.494

(C) Conversion (generally industrial and/or warehouse to office).
(M) Mixed use - office/residential.